THE TUSTIN LEGACY SPECIFIC PLAN AMENDMENT

SCH NO. 1994071005

prepared for
City of Tustin
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June 2024

Draft Supplemental Environmental Impact Report

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1. Executive Summary

This Draft Supplemental Environmental Impact Report (DSEIR) evaluates whether the potential future construction and operation of the proposed Tustin Legacy Specific Plan Amendment (Modified Project) would result in environmental effects that were not examined in the previously approved Marine Corp Air Station (MCAS) Environmental Impact Report/Environmental Impact Statement (EIR/EIS), and subsequent environmental documents, including the most recent approved amendment, the 2017 Tustin Legacy Specific Plan Amendment (TLSP SPA) SEIR. This Draft SEIR has been prepared in conformance with State and City of Tustin environmental policy guidelines for the implementation of the California Environmental Quality Act (CEQA).

This Draft SEIR is being circulated for review and comment by the public and other interested parties, agencies, and organizations for 45 days in accordance with Section 15087 and Section 15105 of the CEQA Guidelines. During the 45-day review period, the Draft SEIR will be available for public review at the City of Tustin website http://www.tustinca.org/HousingElementRezone.

A physical copy is available for review at the following locations:

City of Tustin
300 Centennial Way
Tustin, CA 92780

Orange County Library – Tustin Branch
345 E. Main Street
Tustin, CA 92780

Written comments related to environmental issues in the Draft SEIR should be addressed to:

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A Notice of Availability of the Draft SEIR was published concurrently with distribution of this document.

1.1 PROJECT BACKGROUND

The City of Tustin is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA). The City of Tustin prepared the 2021-2029 Housing Element of the General Plan – the most recent update to the Housing Element that covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029 – in accordance with Government Code Section 65580 et seq. (*Housing Elements*).

On October 5, 2021, the City Council adopted Resolution No. 21-86, certifying the Negative Declaration (ND) for General Plan Amendment (GPA) 2021-0002, which analyzed environmental impacts related to the City's Draft Housing Element Update (HEU) of the General Plan (Resolution No. 21-87, approving GPA 2021-0002). Following preparation of the Draft HEU and certification of the ND, the Draft Housing Element went through several rounds of revisions and submittal for review to the State Department of Housing and Community Development (HCD). The City received formal HCD certification of the HEU on September 12,

2022. On October 4, 2022, the City Council adopted Resolution No. 22-47, approving GPA 2022-0002 for the final HEU.

The 2021-2029 Housing Element includes several provisions that aim to ensure the City can meet the required "fair share" of affordable housing units, as specified by the State of California. During the Housing Element process, the City assessed a number of sites and areas throughout the community that would be able to accommodate the City's assigned 2021 Regional Housing Needs Allocation (RHNA). The City identified 19 sites and one housing category (accessory dwelling units [ADUs]/junior accessory dwelling units [JADUs]) as qualifying sites to accommodate its RHNA allocation. Of the 19 Housing Element inventory sites, Sites 1A, 1B and 2 (Modified Project site), are within the TLSP and were identified as requiring rezoning under Housing Element Program 1.1a to allow for increased residential capacity.

1.2 PROJECT LOCATION

The Tustin Legacy Specific Plan (TLSP) area is in the City of Tustin. The City of Tustin is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east; Santa Ana to the west; and Orange and unincorporated Orange County to the north. Major freeways and highways within or bordering the City of Tustin are the I-5 freeway through the center, State Route (SR) 55 to the west, and SR 261 to the east, as illustrated in Figure 3-1, *Regional Location*.

The TLSP area encompasses approximately 1,606 acres, which includes 1,511 acres in southern Tustin and 95 acres in northeastern Irvine. The TLSP area is generally bounded by Red Hill Avenue to the west, Edinger Avenue to the north, Harvard Avenue to the east, and Barranca Parkway to the south. The local vicinity and the boundary of the TLSP area are illustrated in Figure 3-2, *Local Vicinity*.

The Modified Project site is the portion of the TLSP area that the Project proposes to amend through a Specific Plan Amendment (SPA). The Modified Project site consists of three TLSP subareas spread across two geographically defined areas, referred to as "Neighborhoods" within the TLSP: Neighborhood D (North and South) and Neighborhood G, as illustrated in Figure 3-3, *TLSP Neighborhoods*.

- Neighborhood D (PAs 8 and 13-14) encompasses 314 acres. Neighborhood D North is generally bounded by Valencia Avenue to the north, Tustin Ranch Road to the east, Warner Avenue to the south, and Armstrong Avenue to the west. Neighborhood D South is generally bounded by Warner Avenue to the north, Tustin Ranch Road to the east, Barranca Parkway to the south, and Armstrong Avenue to the west. As required by the California Department of Housing and Community Development (HCD), the City identified specific housing sites in its HEU as adequate and available for future residential development consistent with the State's requirements for various income categories. The parcels of Neighborhood D that were identified within the HEU as suitable for future development encompass a total of 84.73 acres within Neighborhood D North and Neighborhood D South. These housing sites included Housing Element (HE) Site 1A, a 39.87-acre within Neighborhood D North, and HE Site 1B, a 44.86-acre site within Neighborhood D South (84.73 acres total). Neighborhood D South was identified in the past two planning HE cycles as suitable for future housing. Neighborhood D North has never been considered for future housing prior to the HEU.
- Neighborhood G (PA 15) encompasses 271 acres. Neighborhood G is in the northeastern portion of the TLSP area. An approximate 50.23-acre undeveloped area within the western portion of the 271-acre Neighborhood G was identified within the HEU as suitable for future residential development. This site was included in Appendix B of the City's HEU as Site 2. Neighborhood G was identified in the previous planning cycle as suitable for future residential development. Neighborhood G is generally bounded by Edinger Avenue to the north, Jamboree Road to the east, Warner Avenue to the south and Tustin Ranch Road to the west.

1.3 PROJECT DESCRIPTION SUMMARY

The TLSP identifies a dwelling unit and nonresidential square footage capacity or "cap" for each neighborhood, as opposed to application of traditional density and floor area ratio standards. This allows for greater flexibility in design of the TLSP area. The proposed TLSP SPA would amend Planning Areas (PAs) and their respective neighborhoods, Neighborhood D North, D South, and G, to increase the residential caps to be consistent with the certified HEU, as shown in Table 3-2.

The proposed cap increase would add a total of 855 additional residential units to the existing residential capacity of the Modified Project area (Neighborhoods D and G). The capacity increase would also include 1,356 "buffer units" that were assigned in the City's HEU and are intended to make up for any potential units that are not developed as assumed under the HEU on other housing sites. Therefore, a total of 2,211 units have been added to the existing residential cap of the TLSP within PAs 8, 13-14, and 15 of Neighborhoods D and G.

Additionally, the provision for State density bonus is applicable to the TLSP area. Therefore, an additional 2,759 units have been conservatively included in this analysis to anticipate the potential application of density bonuses in future residential development projects.

Together, the HEU RHNA units, buffer units, and density bonus units total a potential increase of 4,970 units to the TLSP area that are analyzed in this DSEIR as the Modified Project.

Proposed SPA. The Modified Project is an SPA to the TLSP to increase allowed capacity for the future development of residential units within Neighborhood D South (PA 13-14), Neighborhood D North (PA 8), and Neighborhood G (PA 15), consistent with the approved HEU of the Tustin General Plan. Proposed additional capacity would include the housing units allocated the TLSP to accommodate the City's RHNA and buffer units included as part of the HEU. These units would be incorporated to the TLSP housing caps, and residential capacities would be updated accordingly for Neighborhood D North, providing a new total residential capacity of 1,911 units (555 units + 1,356 buffer units); Neighborhood D South, increasing the total residential capacity from 1,672 to 1,772 units; and Neighborhood G, increasing the residential capacity from 2,814 to 3,014 units. The Modified Project would designate APNs 430-381-41 and 430-381-91 of PA 8, Neighborhood D North, exclusively for residential land uses such that nonresidential uses are prohibited as part of the SPA.

The Draft SEIR also considers density bonus units available to developers under the Surplus Land Act (SLA) and State density bonus law Density bonus, applicable to all undeveloped residential land uses within the TLSP area, including the newly added 6th cycle RHNA units, as well as the remaining buildout capacity of existing residential land uses within the TLSP area. Additionally, minor changes to the planned roadway system in PA 15 of Neighborhood G would be made.

Nonresidential Uses. In addition to the proposed changes above, the TLSP nonresidential land use breakdown used for modeling and trip budgets of the Approved Project have been updated for the Modified Project analysis. These changes have been made to reflect a series of factors, including entitled/built projects, forecasted market conditions, and anticipated future development. However, changes to the proposed nonresidential land use breakdown would not require an SPA since proposed land uses would fit within existing nonresidential development caps and allowed uses of each of the PAs and neighborhoods. The land use breakdown is used strictly for trip budgeting and modeling purposes. Overall, the changes amongst the various nonresidential land uses would result in no net change in nonresidential square footage (see Table 3-2 below). Notable changes include a reduction in future hotel uses and an increase in continuing care/senior housing land use in Neighborhood D South, a reduction in community commercial uses and increase in office uses in Neighborhood D North, and a reduction in continuing care (senior housing) uses and increase in community commercial and office uses in Neighborhood G.

1.4 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (Title 14 California Code of Regulations [CCR]) requires "A statement of objectives sought by the proposed project. A clearly written statement of objectives would help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and would aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project." The proposed TLSP amendment outlines a variety of "Guiding Principles" and related Goals that form the Project Objectives of the Project, including the following:

- Implement Program 1.1a of the 6th Cycle HEU to provide for the opportunity for future residential development on three sites in the TLSP as identified by the City's HEU, with a minimum density of 20 units per acre (du/acre) on the selected sites.
- Reposition the remaining undeveloped lands in Planning Areas 8, 13, 14 & 15 to allow increased capacity for residential development and to accommodate various levels of affordability.
- Provide for the streamlining of residential development to accommodate various levels of affordability through implementation of clear and objective design standards.
- Amend the TLSP to be consistent with existing State housing law, including the provision for State density bonus.

1.5 SUMMARY OF IMPACTS

Table 1-1 summarizes the conclusions of the environmental analysis contained in this Draft SEIR. Section 7.0, *Effects Not Found Significant*, establishes that the proposed Project would not result in impacts related to certain thresholds from CEQA Appendix G, including Aesthetics, Agricultural Resources, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Mineral Resources, Recreation, and Wildfire. Thus, no further assessment of those impacts was required in the Draft SEIR. Therefore, the numbering of impacts shown in Table 1-1 reflects the omission of further evaluation for certain thresholds.

Relevant standard conditions of approval are identified, and mitigation measures are provided for all potentially significant impacts. The level of significance of impacts after applying the existing and proposed mitigation measures are identified as either significant and unavoidable, less than significant, or no impact.

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Table 1-1: Summary of Impacts

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 Air Quality				
Impact AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?		Potentially significant.	No feasible mitigation measures.	Significant and Unavoidable.
Impact AQ-2: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard?	**PPP AQ-1: Rule 403.** The following measures shall be incorporated into construction plans and specifications as implementation of Rule 403: • All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions. • The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the proposed Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day. • The contractor shall ensure that traffic speeds on	Potentially significant.	**Applicable 2017 SEIR Mitigation Measures** **2017 SEIR MM AQ-2:** Prior to issuance of grading permits, the project applicant shall use low VOC architectural coatings for all interior and exterior painting operations. **2017 SEIR MM AQ-3:** Prior to the issuance of development permits for new non-residential projects with 100 or more employees, and expanded projects where additional square footage would result in a total of 100 or more employees, the City of Tustin and the City of Irvine, as applicable, shall impose a mix of TDM measures which, upon estimation, would result in an average vehicle ridership of at least 1.5, for each development with characteristics that would be reasonably conducive to successful implementation of such TDM measures. These TDM measures may include one or more of the following, as determined appropriate and feasible by each city on a case-by-case basis:	Significant and Unavoidable.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	unpaved roads and Project site areas are reduced to 15 miles per hour or less. **PPP AQ-2: Rule 1113.** The following measure shall be incorporated into construction plans and specifications as implementation of Rule 1113. The proposed Project shall only use "Low-Volatile Organic Compounds (VOC)" paints (no more than 50 gram/liter of VOC) consistent with SCAQMD Rule 1113. **PPP AQ-3: Rule 445.** The following measure shall be incorporated into construction plans and specifications as implementation of Rule 445. Wood burning stoves and fireplaces shall not be included or used in the new development. **PPP AQ-4: CALGreen Building Standards MERV 13 Filters.** Indoor air quality within mechanically ventilated buildings shall comply with Section 5.504.5.3 (Filters) of the California Green Building Standards Code Part 11 that requires utilization of at least a Minimum Efficiency Reporting Value (MERV) of 13 air filtration systems. The Code requires MERV 13 filters to be installed prior to occupancy and replaced		• Establish preferential parking for carpool vehicles. • Provide bicycle parking facilities. • Provide shower and locker facilities. • Provide carpool and vanpool loading areas. • Incorporate bus stop improvements into facility design. • Implement shuttles to shopping, eating, recreation, and/or parking and transit facilities. • Construct remote parking facilities. • Provide pedestrian circulation linkages. • Construct pedestrian grade separations. • Establish carpool and vanpool programs. • Provide cash allowances, passes, and other public transit and purchase incentives. • Establish parking fees for single occupancy vehicles. • Provide parking subsidies for rideshare vehicles.	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	and/or maintained as directed by the manufacturer.		• Institute a computerized commuter rideshare matching system. • Provide a guaranteed ride-home program for ridesharing. • Establish alternative work week, flex-time, and compressed work week schedules. • Establish telecommuting or work-at-home programs. Provide additional vacation and compensatory leave incentives. • Provide on-site lunch rooms/cafeterias and commercial service such as banks, restaurants, and small retail. • Provide on-site day care facilities. • Establish an employee transportation coordinator(s). **2017 SEIR MM AQ-4:** If not required under each individual development's TDM plan, the City of Tustin and the City of Irvine, as applicable, shall implement the following measures, as determined appropriate or feasible by each city on a case-by-case basis:	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			• Reschedule truck deliveries and pickups for off peak hours. • Implement lunch shuttle service from a worksite(s) to food establishments. • Implement compressed work week schedules where weekly work hours are compressed into fewer than five days, such as 9/80, 4/40, or 3/36. • Provide on site child care and after school facilities or contribute to off site developments within walking distance. • Provide on site employee services such as cafeterias, banks, etc. • Implement a pricing structure for single occupancy employee parking, and/or provide discounts to ride sharers. • Construct off site pedestrian facility improvements such as overpasses and wider sidewalks. • Include retail services within or adjacent to residential subdivisions.	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			• Provide shuttles to major rail transit centers or multi modal stations. • Contribute to regional transit systems (e.g., right of way, capital improvements, etc.). • Synchronize traffic lights on streets impacted by development. • Construct, contribute, or dedicate land for the provision of off site bicycle trails linking the facility to designated bicycle commuting routes. • Include residential units within a commercial development. • Provide off site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on site improvements, such as bicycle paths. • Include bicycle parking facilities such as bicycle lockers. • Include showers for bicycling and pedestrian employees' use. • Construct on site pedestrian facility improvements, such as building access, which is physically separated from	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			street and parking lot traffic, and walk paths **2017 SEIR MM AQ-5:** Applicants for new development projects within the Tustin Legacy Specific Plan shall require the construction contractor to use equipment that meets the US Environmental Protection Agency (EPA) Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities, unless it can be demonstrated to the City of Tustin that such equipment is not available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what would be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine, as defined by the California Air Resources Board's regulations. Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 4 or higher emissions standards for construction equipment with more than 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the site for the verification of the City of		

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			Tustin. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board Rule 2449. **Proposed Mitigation Measures** **Mitigation Measure AQ-1: Vehicle Trip Reduction.** Rental Units: Upon a residential dwelling being rented or offered for rent, the Project Applicant shall notify and offer to the tenant or prospective tenant, materials describing public transit, ridesharing, and nonmotorized commuting opportunities in the vicinity of the development. The materials shall be approved by the City of Tustin. The materials shall be provided no later than the time the rental agreement is executed. This information shall be submitted to the City of Tustin Planning Division for review and approval, prior to the issuance of the first certificate of occupancy. **Mitigation Measure AQ-2: Prohibition of Fireplaces.** The installation of wood-burning and natural gas devices shall be	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			prohibited inside residential dwelling units. The purpose of this measure is to limit emissions of ROG, NO_X, and particulate matter emissions from wood-burning and natural gas devices used for primary heat, supplemental heat, or ambiance. This prohibition shall be noted on the deed and/or lease agreements for tenants to obey. **Mitigation Measure AQ-3: Electric Landscape Equipment.** Prior to the issuance of occupancy permits, the Planning Division shall confirm that the proposed Project's Codes Covenants and Restrictions (CC&Rs) and/or tenant lease agreements include contractual language that all landscaping equipment used on site shall be 100 percent electrically powered. All residential and non-residential properties shall be equipped with exterior electrical outlets to accommodate this requirement. This requirement shall be included in the third-party vendor agreements for landscape services for the building owner and tenants, as applicable. **MM AQ-4: Low VOC Paint (Operations).** The Project Applicant shall require by contract specifications for commercial development to use interior and exterior architectural	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			coatings (paint and primer including parking lot paint) products that have a volatile organic compound rating of 10 grams per liter or less. Contract specifications shall be reviewed and approved by the City of Tustin prior to the issuance of occupancy permits. This measure shall be made a condition of approval for continued upkeep of the property.	
Impact AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?	**PPP AQ-1: Rule 403.** As listed previously. **PPP AQ-2: Prohibition of Fireplaces.** As listed previously. **PPP AQ-3: Electric Landscape Equipment.** As listed previously. **PPP AQ-4: Low VOC Paint (Operations).** As listed previously.	Potentially significant.	**Applicable 2017 SEIR Mitigation Measures** **2017 SEIR MM AQ-6:** Prior to the issuance of grading permits, the applicants for individual new developments shall evaluate localized construction-related air quality impacts. Localized construction emissions shall be evaluated to the South Coast Air Quality Management District's Localized Significance Thresholds for construction. Applicable mitigation measures to reduce potential localized construction-related air quality impacts shall be included in the evaluation, as necessary, to minimize impacts to the extent feasible and shall be implemented. The evaluation shall be submitted to the City of Tustin for review. In addition, all recommended mitigation measures shall be noted on all construction plans submitted to the City of	Significant and Unavoidable.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			Tustin Building and Public Works Department for verification.	
Impact AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?		Less than significant.	No mitigation is required.	Less than significant.
Cumulative	**PPP AQ-1: Rule 403.** As listed previously. **PPP AQ-2: Prohibition of Fireplaces.** As listed previously. **PPP AQ-3: Electric Landscape Equipment.** As listed previously. **PPP AQ-4: Low VOC Paint (Operations).** As listed previously.	Potentially significant.	**Applicable 2017 SEIR Mitigation Measures** **2017 SEIR MM AQ-2:** As listed previously. **2017 SEIR MM AQ-3:** As listed previously. **2017 SEIR MM AQ-4:** As listed previously. **2017 SEIR MM AQ-5:** As listed previously. **2017 SEIR MM AQ-6:** As listed previously. **Proposed Mitigation Measures** **Mitigation Measure AQ-1: Vehicle Trip Reduction.** As listed previously. **Mitigation Measure AQ-2: Prohibition of Fireplaces.** As listed previously. **Mitigation Measure AQ-3: Electric Landscape Equipment.** As listed previously. **Mitigation Measure AQ-4: Low VOC Paint (Operations).** As listed previously.	Significant and unavoidable.
5.2 Energy				

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact ENE-1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?		Less than significant.	No mitigation measures are required.	Less than significant.
Impact ENE-2: Would the Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?		No impact.	No mitigation measures are required.	No impact.
Cumulative		Less than significant.	No mitigation measures are required.	Less than significant.
5.3 Greenhouse Gas Emissions				
Impact GHG-1: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?		Potentially significant.	**Applicable 2017 SEIR Mitigation Measures** **2017 SEIR MM AQ-3:** As listed previously. **2017 SEIR MM AQ-4:** As listed previously. **2017 SEIR MM AQ-5:** As listed previously. **Mitigation Measure AQ-1: Vehicle Trip Reduction.** As listed previously. **Mitigation Measure AQ-2: Prohibition of Fireplaces.** As listed previously. **Mitigation Measure AQ-3: Electric Landscape Equipment.** As listed previously.	Significant and Unavoidable.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			Mitigation Measure AQ-4: Low VOC Paint (Operations). As listed previously. **Proposed Mitigation Measures** **Mitigation Measure GHG-1: Solar Panels.** Projects shall be required to install solar photovoltaic (PV) panels or other source of renewable electricity generation onsite, based on the maximum roof area available for solar (i.e., solar-ready zone). The solar-ready zone shall in the minimum, comply with Section 110.10 of the 2022 California Energy Code and shall comply with access, pathway, ventilation, and spacing requirements, and exclude skylight area. The final PV generation facility size requires approval by Southern California Edison (SCE). SCE's Rule 21 governs operating and metering requirements for any facility connected to SCE's distribution system. Should SCE limit the offsite export, the Projects may utilize a battery energy storage system (BESS) to lower offsite export while maintaining onsite renewable generation to offset consumption. The electrical system and infrastructure must be clearly labeled with noticeable and permanent signage. The schedule of photovoltaic system locations may be updated as needed.	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			Mitigation Measure GHG-2: LEED/CalGreen Tier 2 Charging Stations. Prior to the issuance of building permits, project applicant or successor in interest shall provide documentation to the City of Tustin demonstrating the following: • The project shall be designed to achieve Leadership in Energy and Environmental Design (LEED) certification to meet or exceed CALGreen Tier 2 standards in effect at the time of building permit application in order to exceed 2022 Title 24 energy efficiency standards. • The project shall provide facilities to support electric charging stations per the Tier 2 standards in Section A5.106.5.3 (Nonresidential Voluntary Measures) and Section A5.106.8.2 (Residential Voluntary Measures) of the 2022 CALGreen Code. **Mitigation Measure GHG-3: Energy Efficient Appliances.** All major applicant provided in-unit residential appliances (e.g., dishwashers, refrigerators, clothes washers and dryers, water heaters, and for space heating) provided/installed shall be electric (i.e., appliances that do not use natural gas, propane, or	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			other fossil fuels) and Energy Star certified or of equivalent energy efficiency where applicable. Prior to the issuance of the certificate of occupancy, the City of Tustin shall verify implementation of this requirement. Installation of electric Energy Star–certified or equivalent appliances shall be verified by the Planning and Building Department during plan check.	
Impact GHG-2: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?		Less than significant.	No mitigation measures are required.	Less than significant.
Cumulative		Potentially significant.	**Applicable 2017 SEIR Mitigation Measures** **2017 SEIR MM AQ-3:** As listed previously. **2017 SEIR MM AQ-4:** As listed previously. **2017 SEIR MM AQ-5:** As listed previously. **Proposed Mitigation Measures** **Mitigation Measure AQ-1: Vehicle Trip Reduction.** As listed previously. **Mitigation Measure AQ-2: Prohibition of Fireplaces.** As listed previously.	Significant and Unavoidable.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			Mitigation Measure AQ-3: Electric Landscape Equipment. As listed previously. **Mitigation Measure AQ-4: Low VOC Paint (Operations).** As listed previously. **Mitigation Measure GHG-1: Solar Panels.** As listed previously. **Mitigation Measure GHG-2: LEED/CalGreen Tier 2 Charging Stations**. As listed previously. **Mitigation Measure GHG-3: Energy Efficient Appliances**. As listed previously.	
5.4 Land Use and Planning				
Impact LU-2: Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?		Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures** **(a)** The City of Tustin or City of Irvine, as appropriate, shall ensure that infrastructure is constructed in phases as triggered by identified thresholds in Table 4-2 of the revised Specific Plan Phasing Plan, Phasing Plan Requirements (see Table 4-2 at the end of this Mitigation Monitoring and Reporting Program). The Phasing Plan provides an organizational framework to facilitate development of the reuse	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			plan area in tandem with infrastructure necessary to support the planned development. (As amended by Addendum) This framework reflects the fact that each component of the infrastructure has its own threshold for accommodating additional development toward build out of the reuse plan area. The triggering mechanisms that identify timing of key infrastructure provisions are summarized in Table 4-2 of the revised Specific Plan Phasing Plan, Phasing Plan Requirements (see Table 4-2 at the end of this Mitigation Monitoring and Reporting Program). **(b)** Prior to a final map recordation (except for financing and re-conveyance purposes), the development applicant shall enter into an agreement with the City of Tustin and City of Irvine and any appropriate regional utility agencies, districts,	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			and providers, as applicable, to dedicate all easement, right-of-ways, or other land determined necessary to construct adequate utility infrastructure and facilities to serve the project as determined by the City, Agency, District, or other providers. **(c)** Prior to any final map recordation (except for financing and conveyance purposes), the development applicant shall enter into a secured agreement with the cities of Tustin and/or Irvine, as applicable, to participate on a pro rated basis in construction of capital improvements necessary to provide adequate utility facilities. **(d)** Prior to the issuance of permits for any public improvements or development project, a development applicant shall submit to the City of Tustin and City of Irvine, as applicable, information from IRWD which outlines required facilities necessary to	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			provide adequate potable water and reclaimed water service to the development. **(e)** Prior to the issuance of building permits, the project developer shall ensure that fire hydrants capable of flows in amounts approved by the OCFA are in place and operational to meet fire flow requirements. (As amended by Addendum) **(f)** Prior to the issuance of permits for any public improvements or development project, a development applicant shall submit to the City of Tustin and City of Irvine, as applicable, information from IRWD or the City of Tustin which outlines required facilities necessary to provide adequate sanitary sewage service to the development. **(g)** Prior to the issuance of grading permits or approval of any subdivision map (except for financing and re-conveyance purposes), whichever occurs first, for development within the	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			100 year flood plain, grading and drainage systems shall be designed by the project developer such that all building pads would be safe from inundation from runoff from all storms up to and including the theoretical 100 year storm, to the satisfaction of the City of Tustin Building Division or the Irvine Public Works Department, as applicable. Grading permits or subdivision maps generated for financing and conveyance purposes are exempt. **(h)** Prior to construction of regional flood control facilities, appropriate state and federal approvals, including agreements and permits, shall be obtained. These include but are not limited to Regional Water Quality Control Board permits, including NPDES permits; Section 401 water quality certifications; Section 404 permits from the USACOE, and Section 1601 or 1603 agreements from the	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			CDFG in a manner meeting the approval of the City of Tustin and the Irvine Public Works Department, as applicable. (As amended by Addendum) **(i)** Prior to issuance of any grading permit or approval of any subdivision map (except for financing and conveyance purposes), for any development that is either partially or completely located within the 100 year flood plain of the Flood Insurance Rate Map, the development applicant shall submit all required documentation to the FEMA and demonstrate that the application for a Conditional Letter of Map Revision for changes to the 100 year flood plain is satisfied in a manner meeting the approval of each respective city, as applicable. **(j)** Prior to the approval of any applicable subdivision map (except for financing and conveyance purposes),	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			the developer applicant shall design and construct local drainage systems for conveyance of the 10 year runoff. If the facility is in a local sump, it shall be designed to convey the 25 year runoff. **(k)** Prior to any grading for any new development, the following drainage studies shall be submitted to and approved by the City of Tustin, City of Irvine, and/or OCFCD, as applicable: (1) A drainage study including diversions (i.e., off site areas that drain onto and/or through the project site), with justification and appropriate mitigation for any proposed diversion. (2) A drainage study evidencing that proposed drainage patterns would not result in increased 100 year peak discharges within and downstream of the project limits, and would not worsen existing drainage conditions	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			at storm drains, culverts, and other street crossings including regional flood control facilities. The study shall also propose appropriate mitigation for any increased runoff causing a worsening condition of any existing facilities within or downstream of project limits. Implementation of appropriate interim or ultimate flood control infrastructure construction must be included. (3) Detailed drainage studies indicating how, in conjunction with the drainage conveyance systems including applicable swales, channels, street flows, catch basins, storm drains, and flood water retarding, building pads are made safe from runoff inundation which may be expected from all storms up to and including the	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			theoretical 100 year flood. **(l)** Prior to approval of any subdivision map (except for financing or conveyance purposes), an agreement will be executed with the OCFCD that provides for the identification and contribution of a project specific Fair Share contribution toward the construction of ultimate flood control facilities needed to accommodate build out of the affected project. Interim flood control facilities may be considered for approval provided such facilities meet OCFCD requirements. Nothing shall preclude the City of Tustin from transferring the obligation onto other project developers within the project area. **(m)** General The City of Tustin and the City of Irvine, each within its respective jurisdiction, shall ensure that adequate fire protection, police protection, libraries, and parks and recreation facilities (including	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			bikeways/trails) needed to adequately serve the reuse plan area shall be provided as necessary. To eliminate any negative impact the project could have on each community's general fund, financing mechanisms including but not limited to developer fees, assessment district financing, and/or tax increment financing (in the event that a redevelopment project area is created for the site), shall be developed and used as determined appropriate by each City. Specifically; (1) Applicants for private development projects shall be required to enter into an agreement with City of Tustin or the City of Irvine, as applicable, to establish a fair share mechanism to provide needed fire and police protection services, libraries, and parks and recreation facilities (including bikeways) through the use of fee	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			schedules, assessment district financing, Community Facility District financing, or other mechanisms as determined appropriate by each respective city. (2) Recipients of property through public conveyance process, or other conveyance procedures, shall be required to mitigate any impacts of their public uses of property on public services and facilities. (As amended by Addendum) **(n)** The cities of Tustin and Irvine shall jointly consult and coordinate with the Orange County Parks, Program Management and Coordination Division, in preparation of trail designs for the Peters Canyon and Barranca trails within the reuse plan area. Improvements for each of these trails would be installed upon completion of flood control channel	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			improvements and approval of their joint use by the OC Parks. **(o)** Fire Protection/ Emergency Medical Services Prior to the first final map recordation or building permit issuance for development (except for financing and re-conveyances purposes), the project developer could be required to enter into an agreement with the City of Tustin or City of Irvine/OCFA, as applicable, to address impacts of the project on fire services. Such agreement could include participation for fire protection, personnel and equipment necessary to serve the project and eliminate any negative impacts on fire protection services. **(p)** Prior to issuance of building permits, the project developer shall work closely with the OCFA to ensure that adequate fire protection measures are implemented in the project.	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			(q) Prior to issuance of building permits for phased projects, the project developer shall submit a construction phasing plan to the OCFA demonstrating that emergency vehicle access is adequate. **(r)** Prior to the issuance of building permits, the project developer shall submit a fire hydrant location plan for the review and approval of the Fire Chief and ensure that fire hydrants capable of flows in amounts approved by the OCFA are in place and operational to meet fire flow requirements. **(s)** Police Protection Prior to issuance of building permits, the project developer shall work closely with the respective Police Department to ensure that adequate security precautions are implemented in the project. **(t)** Schools Prior to the issuance of building permits, the project developer shall	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			submit to the respective City proof of payment of appropriate school fees adopted by the applicable school district pursuant to Government Code Section 65995. Alternatively, a project developer may enter into a mutual agreement with an applicable school district to provide alternative mitigation that addresses student generation increases. (As amended by Addendum) **(u)** Parks and Recreation Prior to the first final map recordation (except for financing and re-conveyance purposes) or building permit issuance for development within the City of Tustin portion of the site, the project developer shall be required to provide evidence of compliance with all requirements and standards of the City of Tustin Park Code. **(v)** Prior to the first final map recordation or building permit issuance within the City of Irvine portion of the site, the project developer shall	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			be required to provide evidence of compliance with all requirements and standards of the City of Irvine Park Code. **(w)** Prior to the first concept plan for tentative tract map in the City of Tustin, the project developer shall file a petition for the creation of a landscape maintenance district for the project area with the City of Tustin. The district shall include public neighborhood parks, landscape improvements, and specific trails (Barranca only), the medians in arterials, or other eligible items mutually agreed to by the petitioner and the City of Tustin. In the event that a district is not established prior to issuance of the first building permit, maintenance of items mentioned above shall be the responsibility of a community association. **(x)** Prior to approval of any subdivision map (except for financing or conveyance purposes), an agreement will be	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			executed with the following agencies for the associated trail improvements: a. County Parks — identification of a project specific Fair Share contribution toward the installation of necessary regional bikeway trail improvements within Peters Canyon Channel, to be installed in conjunction with the County of Orange's other channel improvements; b. City of Tustin — the identification of a project specific Fair Share contribution toward the installation of Class II bicycle trails through the project site. For the area of the site northeast of Irvine Center Drive, a separate agreement would be required to ensure the provision of a bikeway right-of-way easement, and design and construction of a bike trail along the SCRRA/OCTA rail tracks from Harvard Avenue westerly to the Peters Canyon Channel. In addition, project	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			developers of the areas of the site southeast of the Peters Canyon Channel would need to accommodate access to both the Peters Canyon Trail and the trail adjacent to the SCRRA/OCTA tracks in any project site design including dedication of any necessary recreational trail easements; c. City of Tustin — the identification of a project specific Fair Share contribution toward installation of Class I bikeway trail improvements northerly of Barranca Parkway after completion of the Barranca Channel improvements. For proposed developments adjacent to Barranca Channel, separate agreements would be required to ensure the establishment of a bikeway right-of-way easement between Jamboree Road and Red Hill Avenue.	
Cumulative		Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures**	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			(a). As listed previously. **(b).** As listed previously. **(c).** As listed previously. **(d).** As listed previously. **(e).** As listed previously. **(f).** As listed previously. **(m).** As listed previously. **(o).** As listed previously. **(p).** As listed previously. **(q).** As listed previously. **(r).** As listed previously. **(s).** As listed previously. **(t).** As listed previously. **(u).** As listed previously. **(v).** As listed previously. **(w).** As listed previously. **(x).** As listed previously.	
5.5 Noise				
Impact NOI-1: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	**PPP NOI-1: Construction Hours.** Per the Tustin City Code Section 4616, construction activities are allowed only between the hours of 7:00 AM and 6:00 PM, Monday through Friday and between 9:00 AM to 5:00 PM on Saturdays, with no activity allowed on Sundays and City-observed federal holidays.	Potentially significant.	**Applicable 2017 SEIR Mitigation Measures** **2017 SEIR MM N-3:** For new development within the reuse area, the City of Tustin and City of Irvine, as applicable shall ensure that interior and exterior noise levels do not exceed those prescribed by state requirements and local city ordinances and general plans. Plans demonstrating noise regulation conformity shall be submitted for review and approval prior to	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			building permits being issued to accommodate reuse.	
Impact NOI-2: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?	**PPP NOI-1: Construction Hours.** As listed previously.	Less than significant.	No mitigation measures are required.	Less than significant.
Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?		Less than significant.	No mitigation measures are required.	Less than significant.
Cumulative	**PPP NOI-1: Construction Hours.** As listed previously.	Less than significant.	No mitigation measures are required.	Less than significant.
5.6 Population and Housing				
Impact POP-1: Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?		Less than significant.	No mitigation measures are required.	Less than significant.
Cumulative		Less than significant.	No mitigation measures are required.	Less than significant.
5.7 Public Services				
Impact PS-1: Would the Project result in substantial adverse physical impacts associated with		Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures**	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: (i) Fire protection? (ii) Police protection? (iii) Schools? (iv) Parks? (v) Other public facilities?			**(f).** As listed previously. **(m).** As listed previously. **(o).** As listed previously. **(p).** As listed previously. **(q).** As listed previously. **(r).** As listed previously. **(s).** As listed previously.	
Cumulative		Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures** **(f).** As listed previously. **(m).** As listed previously. **(o).** As listed previously. **(p).** As listed previously. **(q).** As listed previously. **(r).** As listed previously. **(s).** As listed previously.	Less than significant.
5.8 Transportation				
Impact TRA-1: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?		Less than significant.	None required.	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact TRA-2: Would the Project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?		Less than significant.	None required.	Less than significant.
Impact TRA-4: Would the Project result in inadequate emergency access?	**PPP T-1: Traffic Control/Utilities.** All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.	Less than significant.	None required.	Less than significant.
Cumulative	**PPP T-1: Traffic Control/Utilities.** As listed previously.	Less than significant.	None required.	Less than significant.
5.9 Tribal Cultural Resources				
Impact TCR-1: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a	**PPP TCR-1**: Native American historical and cultural resources and sacred sites are protected under PRC Sections 5097.9 to 5097.991, which require that descendants be notified when Native American human remains are discovered and provide for treatment and disposition of human remains and associated grave goods.	Potentially significant.	**TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities** a. Prior to the issuance of demolition or grading permits for any projects that would disturb previously undisturbed soils (native soils) or soils that have native fill, the project applicant/developer shall retain a Native American	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
California Native American tribe, and that is: (i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? (ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	**PPP CUL-1: Human Remains.** Should human remains or funerary objects be discovered during Project construction, the Project would be required to comply with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body (within a 100-foot buffer of the find) until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine the identity of and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD must complete the inspection within 48 hours of notification by the NAHC.		Monitor, with first preference given to the Gabrieleño Band of Mission Indians – Kizh Nation, who responded to the City's request for consultation on November 14, 2023 (first preference Tribe, Tribe). The applicant/developer shall allow 45 days from the initial contact with the first preference tribe to enter into a contract for monitoring services. If the applicant/developer is unable to contact the Kizh Nation after three documented attempts or is unable to secure an agreement, the applicant shall report to the lead agency, and the lead agency will contact the Kizh Nation to validate that the parties were unable to enter into an agreement. The applicant/developer shall have made three documented attempts to directly contact the Kizh Nation to enter into a tribal monitoring agreement. If the applicant/developer can demonstrate they were unable to secure an agreement with the first preference tribe, as validated and documented by the Community Development Department in	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			writing, or if the contracted tribe fails to fulfill its obligation under the contract terms, then the applicant/developer may retain an alternative qualified tribal monitor from a culturally affiliated tribe if approved by the City. The monitor shall be retained prior to the issuance of a demolition permit or grading permit, and the commencement of any development related "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, auguring, grubbing, boring, grading, excavation, drilling, and trenching for the purposes of reconstruction and new development. "Ground-disturbing activity" shall not include minor maintenance activities such as potholing, tree removal, and parking lot maintenance. This mitigation measure does not	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			apply to projects that would only disturb soils made up of artificial fill, as verified by a soils or geotechnical report. b. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity. c. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Kizh Nation. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			provided to the project applicant/lead agency upon written request to the consulting tribe. If a monitor is selected from a tribe other than the Kizh Nation, the Kizh Nation shall be contacted if any discoveries are found. d. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the consulting tribe from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities and that have the potential to impact local TCRs on the project site or in connection with the project are complete. **TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)** Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the tribal monitor and consulting archaeologist. If the consulting tribe is other than the Gabrieleño Band of Mission	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			Indians – Kizh Nation, the Kizh Nation shall be contacted and the consulting tribe will recover and retain all discovered TCRs in the form and/or manner the Kizh Nation deems appropriate, in the Kizh Nation sole discretion, and for any purpose the Kizh Nation deems appropriate, including for educational, cultural and/or historic purposes. **TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects** a. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute. b. If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed. c. Human remains and grave/burial goods shall be treated alike per California	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			Public Resources Code section 5097.98(d)(1) and (2). d. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. e. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.	
Cumulative	**PPP TCR-1**: As listed previously. **PPP CUL-1: Human Remains.** As listed previously.	Potentially significant.	**Proposed Mitigation Measures** **TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.** As listed previously. **TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial).** As listed previously. **TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects.** As listed previously.	Less than significant.
5.10 Utilities and Service Systems				
Impact UT-1: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications	**PPP UT-1: California Building Code.** All future development constructed under the Project shall be subject to the latest version of the California Building Code (CBC) which outlines regulations for building planning	Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures** **(a).** As listed previously. **(b).** As listed previously. **(c).** As listed previously. **(e).** As listed previously.	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
facilities, the construction or relocation of which could cause significant environmental effects?	and construction in the state, including occupancy classification, structural design, building materials, infrastructure needs and fire-resistance requirements. **PPP HYD-1 SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site. **PPP T-2: Traffic Control/Utilities.** All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the		**Proposed Mitigation Measure** **UT-1:** Prior to project approval, the development applicant shall coordinate with IRWD to conduct infrastructure analyses of water and sewer utilities in the project area to ensure existing conveyance and pressure is adequate to serve the project. Once development assumptions identified within the IRWD-approved Sub Area Master Plan (SAMP) are surpassed, project applicants shall coordinate with IRWD to update the SAMP for the TLSP area.	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design			
Impact UT-2: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?		Less than significant.	None required.	Less than significant.
Impact HYD-1: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	**PPP HYD-1:** As listed previously.	Less than significant.	None required.	Less than significant.
Impact HYD-2: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	**PPP HYD-1:** As listed previously.	Less than significant.	None required.	Less than significant.
Impact UT-3: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	**PPP UT-1:** As listed previously. **PPP HYD-1:** As listed previously. **PPP T-2:** As listed previously.	Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures** **(a).** As listed previously. **(b).** As listed previously. **(c).** As listed previously. **(e).** As listed previously. **Proposed Mitigation Measure**	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			UT-1: As listed previously.	
Impact UT-4: Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	**PPP UT-1:** As listed previously. **PPP HYD-1:** As listed previously. **PPP T-2:** As listed previously.	Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures** **(a).** As listed previously. **(b).** As listed previously. **(c).** As listed previously. **(e).** As listed previously. **Proposed Mitigation Measure** **UT-1:** As listed previously.	Less than significant.
Impact UT-5: Require or result in the construction of new stormwater drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	**PPP UT-1:** As listed previously. **PPP HYD-1:** As listed previously. **PPP HYD-2 WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters. **PPP T-2:** As listed previously.	Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures** **(f).** As listed previously. **(g).** As listed previously. **(h).** As listed previously. **(i).** As listed previously. **(j).** As listed previously **(k).** As listed previously	Less than significant.
Impact HYD-3: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the	**PPP UT-1:** As listed previously. **PPP HYD-1:** As listed previously. **PPP HYD-2 WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits	Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures** **(f).** As listed previously. **(g).** As listed previously.	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
addition of impervious surfaces, in a manner which would: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters. **PPP T-2:** As listed previously.		**(h).** As listed previously. **(i).** As listed previously. **(j).** As listed previously **(k).** As listed previously	
Impact UT-6: Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	**PPP UT-1:** As listed previously. **Assembly Bill 939 (Chapter 1095, Statutes of 1989)** **Assembly Bill 341 (Chapter 476, Statutes of 2011)** **Assembly Bill 1826 (Chapter 727, Statutes of 2014)** **Assembly Bill 827** **Senate Bill 1383 (Chapter 395, Statutes of 2016)** **Tustin City Code Article 4, Chapter 3, Part 1**	Less than significant.	None required.	Less than significant.
Impact UT-7: Would the Project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	**PPP UT-1:** As listed previously. **Assembly Bill 939 (Chapter 1095, Statutes of 1989)** **Assembly Bill 341 (Chapter 476, Statutes of 2011)** **Assembly Bill 1826 (Chapter 727, Statutes of 2014)**	Less than significant.	None required.	Less than significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	Assembly Bill 827 **Senate Bill 1383 (Chapter 395, Statutes of 2016)** **Tustin City Code Article 4, Chapter 3, Part 1**			
UT-8: Require or result in the relocation or construction of a new or expanded electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects.	**PPP UT-1:** As listed previously.	Less than significant.	None required.	Less than significant.
Cumulative	**PPP UT-1:** As listed previously. **PPP HYD-1:** As listed previously. **PPP HYD-2:** As listed previously. **PPP T-2:** As listed previously. **Assembly Bill 939 (Chapter 1095, Statutes of 1989)** **Assembly Bill 341 (Chapter 476, Statutes of 2011)** **Assembly Bill 1826 (Chapter 727, Statutes of 2014)** **Assembly Bill 827** **Senate Bill 1383 (Chapter 395, Statutes of 2016)** **Tustin City Code Article 4, Chapter 3, Part 1**	Potentially significant.	**Applicable MCAS FEIR/EIS Implementation Measures** **(a).** As listed previously. **(b).** As listed previously. **(c).** As listed previously. **(e).** As listed previously. **(f).** As listed previously. **(g).** As listed previously. **(h).** As listed previously. **(i).** As listed previously. **(j).** As listed previously **(k).** As listed previously. **Proposed Mitigation Measure** **UT-1:** As listed previously.	Less than significant.

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2. Introduction

This Draft Supplemental Environmental Impact Report (SEIR) is an informational document that evaluates the environmental effects that may result from the planning, construction, and operation of the Tustin Legacy Specific Plan (TLSP) Amendment Project ("Modified Project"), which requires approval of the SEIR, adoption of the TLSP Amendment to increase the allowed number of units in Neighborhood D and a portion of Neighborhood G, and adoption of Objective Design Standards.

2.1 PURPOSE OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) requires that all State and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority prior to acting on those projects. The CEQA Guidelines provide the following information regarding the purpose of an EIR:

- **Project Information and Environmental Effects.** As stated in Section 15121(a) of the CEQA Guidelines, the Draft SEIR is an "informational document" intended to inform the City, other public agencies with discretionary authority over aspects of the Modified Project, the general public, the local community, and other organizations, entities, and interested persons of the scope of the Modified Project, the significant environmental impacts of the Modified Project compared to the Adopted Specific Plan, feasible measures to avoid or minimize the significant effects, and a reasonable range of feasible alternatives to the Modified Project that would avoid or minimize the significant impacts.
- **Standards for Adequacy of an EIR.** A SEIR should be prepared with a sufficient degree of analysis to enable decision makers to make an intelligent decision that takes into account environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of a SEIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (State CEQA Guidelines Section 15151).

As a public disclosure document, the purpose of an EIR is not to recommend either approval or denial of a project, but to provide information regarding the physical environmental changes that would result from an action being considered by a public agency to aid in the agency's decision-making process.

Pursuant to CEQA Guidelines Section 15162 and 15163, a Supplemental EIR (SEIR) is being prepared to update the prior environmental analysis. This SEIR contains information necessary to make the previously certified 2017 SEIR adequate for the proposed Tustin Legacy Specific Plan Amendment (the "Modified Project").

The overall purpose of this Draft SEIR is to inform the City's decision makers and the general public whether the Modified Project, as compared to the Adopted Specific Plan, would result in any new significant impacts or an increase in the severity of significant impacts previously identified for the Adopted Specific Plan. The Adopted Specific Plan is the "baseline" for the analysis in this Draft SEIR and was used in preparing the Initial Study for the Modified Project to evaluate the potential incremental impacts of the Modified Project.

The City must consider the information in this Draft SEIR and make certain findings with respect to each significant impact identified. The City will use the information in the Draft SEIR, along with other information received and/or developed during the public review process for the Draft SEIR, to determine whether to approve, modify, or not approve the Modified Project and, if approval is granted, to specify applicable and enforceable environmental mitigation measures as part of the Modified Project approvals.

2.2 LEGAL AUTHORITY

This Draft SEIR has been prepared in accordance with all criteria, standards, and procedures of CEQA (California Public Resource Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 et seq.).

Pursuant to CEQA Section 21067 and State CEQA Guidelines Article 4 and Section 15367, the City of Tustin is the Lead Agency under whose authority this Draft SEIR has been prepared. "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. Serving as the Lead Agency and before taking action on any approvals for the Modified Project, the City of Tustin has the obligation to: (1) ensure that this Draft SEIR has been completed in accordance with CEQA; (2) review and consider the information contained in this Draft SEIR as part of its decision-making process; (3) make a statement that this Draft SEIR reflects the City's independent judgment; (4) ensure that all significant effects on the environment are eliminated or substantially lessened where feasible; and, if necessary, (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or Modified Project alternatives identified in this Draft SEIR are infeasible and citing the specific benefits of the proposed Modified Project that outweigh its unavoidable adverse effects (State CEQA Guidelines Sections 15090 through 15093).

Pursuant to State CEQA Guidelines Sections 15040 through 15043, and upon completion of the CEQA review process, the City of Tustin will have the legal authority to do any of the following:

- Approve the Modified Project;
- Require feasible changes in any or all activities involved in the Modified Project in order to substantially lessen or avoid significant effects on the environment;
- Disapprove the Modified Project, if necessary, in order to avoid one or more significant effects on the environment that would occur if the Project was approved as proposed; or
- Approve the Modified Project even though the Project would cause a significant effect on the environment if the City of Tustin makes a fully informed and publicly disclosed decision that: (1) there is no feasible way to lessen the effect or avoid the significant effect; and (2) expected benefits from the Project will outweigh significant environmental impacts of the Project.

2.3 SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT PROCESS

A project-level analysis has been provided pursuant to State CEQA Guidelines Section 15161. This Draft SEIR meets the content requirements discussed in State CEQA Guidelines Article 9, beginning with State CEQA Guidelines Section 15120.

2.3.1 Notice of Preparation

Pursuant to the requirements of CEQA, the City of Tustin issued a Notice of Preparation (NOP) for the Modified Project, which was distributed on March 4, 2024, for a public review period of 30 days through April 3, 2024. The purpose of the NOP was to solicit early comments from public agencies with expertise in subjects that are discussed in this Draft SEIR and to solicit comments from the public regarding potential Project environmental impacts. As provided in the NOP, the City of Tustin determined through the initial review process that impacts related to the following topics are potentially significant and required a detailed level of analysis in this Draft SEIR.

- Air quality
- Energy
- Noise
- Population and housing

- Greenhouse gas emissions
- Hydrology and water quality (related to groundwater supply, stormwater drainage, and conflict with plans)
- Land use and planning
- Public services
- Transportation
- Tribal cultural resources
- Utilities and service systems

The NOP requested members of the public and public agencies to provide input on the scope and content of environmental impacts that should be included in the SEIR being prepared. Comments received on the NOP are included in Appendix A and summarized in Table 2-1, which also includes a reference to the Draft SEIR sections in which issues raised in the comment letters are addressed.

Table 2-1: Summary of NOP Comment Letters

Comment Letter and Commet	Relevant Draft SEIR Sections
State and Local Agencies	
Native American Heritage Commission, March 5, 2024	
The commenter includes a description of requirements for preparation of an Environmental Impact Report (EIR) pursuant to CEQA Guidelines Section 15064. Additionally, the commenter provides requirements and project applicability under Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18). The commenter recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible. The commenter provides a summary of requirements for the AB 52 and SB 18 process.	Section 5.9, *Tribal Cultural Resources*
California Department of Transportation, April 3, 2024	
The commenter requests preparation of a Traffic Impact Study and coordination with Caltrans District 12 if impacts are found to be significant. The commenter provides reference to the guidance on preparing vehicle miles traveled analysis. Additionally, the commenter suggests discussion of multimodal transportation in the EIR. The commenter also notes that any work performed within the Caltrans right-of-way is subject to discretionary review and approval by Caltrans and an encroachment permit issued by Caltrans prior to construction.	Section 5.8, *Transportation.*
Organization Comments	
Rancho Santiago Community College District, March 29, 2024	
This comment letter notes that the Rancho Santiago Community College District has an Orange County Sheriff's Regional Training Academy (OCSRTA) located adjacent to the proposed Project area. The comment states that the District supports the proposed Project but recommends a spatial buffer be included between the OCSRTA facility and potential future sensitive uses.	Section 5.5, *Noise.*
Public Comments	
Jose Lee, March 20, 2024	
This comment letter expresses concern about increasing the residential density within the TLSP as it may lead to an increase in traffic.	Section 5.8, *Transportation.*

Comment Letter and Commet	Relevant Draft SEIR Sections
Tibor Kelemen, April 3, 2024	
This comment letter expresses concern about increasing the residential density in Neighborhood G as it may lead to an increase in traffic.	Section 5.8, *Transportation*.

2.3.2 Public Scoping Meeting

Pursuant to Section 15082(c)(1) of the CEQA Guidelines, the City of Tustin hosted a public scoping meeting for members of the public and public agencies to provide input as to the scope and content of the environmental information and analysis to be included in the Draft SEIR for the Project. A scoping meeting was held on March 20, 2024, at the Community Center at The Market Place (2691 El Camino Real).

2.3.3 Draft SEIR

Topics requiring a detailed level of analysis that are evaluated in this Draft SEIR have been identified based upon the responses to both the NOP and a review of the Project by the City of Tustin. Pursuant to State CEQA Guidelines Section 15125.5(a) which states, "An EIR shall identify and focus on the significant effects on the environment," the City of Tustin determined that Project impacts on the below topics would not be significant. Consequently, these topics are not analyzed in this Draft SEIR, but are further discussed in Section 7, *Effects Found Not Significant*.

- Aesthetics
- Agriculture and forestry resources
- Biological resources
- Cultural resources
- Geology and soil
- Hazards and hazardous materials
- Hydrology and water quality (related to water quality standards, drainage patterns, erosion, and flooding)
- Mineral resources
- Recreation
- Wildfire

The City of Tustin has filed a Notice of Completion (NOC) with the Governor's Office of Planning and Research State Clearinghouse, indicating that this Draft SEIR has been completed and is available for review and comment. The Modified Project has the potential for causing significant effects on the environment extending beyond the City of Tustin; thus, the Modified Project meets the definition of a project of statewide, regional, or areawide significance pursuant to Section 15206 of the CEQA Guidelines and is subject to noticing requirements accordingly. A Notice of Availability (NOA) of the Draft SEIR was published concurrently with distribution of this document. The Draft SEIR is being circulated for review and comment by the public and other interested parties, agencies, and organizations for 45 days in accordance with State CEQA Guidelines Sections 15087 and 15105. During the 45-day review period, the Draft SEIR is available for public review digitally on the City of Tustin's website at:

https://www.tustinca.org/HousingElementRezone

A physical copy is available for review at the following locations:

City of Tustin
300 Centennial Way
Tustin, CA 92780

Orange County Library – Tustin Branch
345 E. Main Street
Tustin, CA 92780

Written comments related to environmental issues in the Draft SEIR should be addressed to:

Samatha Beier, Senior Planner
City of Tustin
300 Centennial Way
Tustin, CA 92780
(714) 573-3354
HousingElementRezone@tustinca.org

2.3.4 Final SEIR

Upon completion of the 45-day review period, written responses to all comments related to the environmental issues in the Draft SEIR will be prepared and incorporated into a Final SEIR. The written responses to comments will be made available at least 10 days prior to the public hearing at which the certification of the Final SEIR will be considered by the City of Tustin City Council. These comments, and their responses, will be included in the Final SEIR for consideration by the City of Tustin, as well as other responsible and trustee agencies per CEQA. The Final SEIR may also contain corrections and additions to the Draft SEIR and other information relevant to the environmental issues associated with the Modified Project. The Final SEIR will be available for public review prior to its certification by the City of Tustin. Notice of the availability of the Final SEIR will be sent to all who comment on the Draft SEIR.

2.4 ORGANIZATION OF THIS DRAFT SEIR

This Draft SEIR is organized into the following Sections. To help the reader locate information of interest, a brief summary of the contents of each chapter is provided.

- **Section 1, Executive Summary:** This section provides a brief summary of the Modified Project area, the Modified Project, and alternatives. This section also provides a summary of the potential environmental impacts and mitigation measures, applicable design features, applicable regulatory requirements, and the level of significance after implementation of the mitigation measure. The level of significance after implementation of the proposed mitigation measure(s) will be characterized as either *less than significant* or *significant and unavoidable*.
- **Section 2, Introduction:** This section provides an overview of the purpose and use of the SEIR, the scope of this Draft SEIR, a summary of the legal authority for the Draft SEIR, a summary of the environmental review process, and the general format of this document.
- **Section 3, Project Description:** This section provides a detailed description of the Modified Project, its objectives, and a list of Project-related discretionary actions.
- **Section 4, Environmental Setting:** This section provides a discussion of the existing conditions within the Project area.
- **Section 5, Environmental Impact Analysis:** This section is divided into sub-sections for each environmental impact area. Each sections includes a summary of the existing statutes, ordinances, and regulations that apply to the environmental impact area being discussed; the analysis of the Modified Project's direct and indirect environmental impacts on the environment, including potential cumulative impacts that could result from the Modified Project; applicable Project design features, standard conditions, and plans, policies, and programs that could reduce potential impacts; and feasible mitigation measures that would reduce or eliminate the significant adverse impacts identified. Impacts that cannot be mitigated to *less than significant* are identified as *significant and unavoidable*.
- **Section 6, Other CEQA Considerations:** This section summarizes the significant and unavoidable impacts that would occur from implementation of the Project and provides a summary of the environmental effects of the implementation of the Modified Project that were found not to be significant. Additionally, this

section provides a discussion of various CEQA-mandated considerations including growth-inducing impacts and the identification of significant irreversible changes that would occur from implementation of the Modified Project. This section also provides a discussion of impacts found not to be significant.

- **Section 7, Effects Found Not to be Significant:** This section summarizes the potential environmental effects related to the Modified Project that were determined not to be significant during preparation of this SEIR.
- **Section 8, Report Preparation and Persons Contacted:** This section lists authors of the Draft SEIR and City of Tustin staff that assisted with the preparation and review of this document. This section also lists other individuals and/or organizations that were contacted for information that is included in this Draft SEIR document.

2.5 INCORPORATION BY REFERENCE

State CEQA Guidelines Section 15150 allows for the incorporation "by reference all or portions of another document… most appropriate for including long, descriptive, or technical materials that provide general background but do not contribute directly to the analysis of a problem at hand." The purpose of incorporation by reference is to assist the Lead Agency in limiting the length of this Draft SEIR. Where this Draft SEIR incorporates a document by reference, the document is identified in the body of the Draft SEIR, citing the appropriate section(s) of the incorporated document and describing the relationship between the incorporated part of the referenced document and this Draft SEIR.

The Adopted TLSP is the "baseline" for the analysis in this Draft SEIR. A background on the TLSP is provided in Section 3.2, *Previous Specific Plan and Environmental Documentation*. The current (Amended) TLSP was approved by the City of Tustin on July 18, 2017, and provides the fundamental basis for the City's current land use and development policies for the TLSP area. The Amended TLSP was the subject of an environmental review under CEQA, and an SEIR for the 2017 TLSP Specific Plan Amendment (SPA) was approved in 2017 along with the SPA (State Clearinghouse Number (SCH) 1994071005). Accordingly, the SEIR for the TLSP is herein incorporated by reference with State CEQA Guidelines Section 15150. The documents are available on the City's website at http://www.tustinca.org/HousingElementRezone.

3. Project Description

"Project," as defined by the State CEQA Guidelines, means "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)… enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700." (14 California Code of Regulations [CCR] Section 15378(a).

The Tustin Legacy Specific Plan Amendment Project ("Modified Project") analyzed in this Draft Supplemental EIR (SEIR) does not propose any development. The Draft SEIR analyzes buildout of the proposed Specific Plan Amendment (SPA) at a programmatic level of detail, based upon the maximum future buildout anticipated by the City of Tustin per the City's certified 2021-2029 Housing Element Update (HEU), compared to the previously approved Tustin Legacy Specific Plan, as amended in 2017 ("Approved Project").

3.1 PROJECT BACKGROUND

The City of Tustin prepared the 2021-2029 Housing Element of the General Plan in accordance with Government Code Section 65580 et seq. The City is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The update to the Housing Element covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029. The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with the State-allocated Regional Housing Needs Allocation (RHNA).

On October 5, 2021, the City Council adopted Resolution No. 21-86, certifying the Negative Declaration (ND) for GPA 2021-0002 (and Resolution No. 21-87, approving GPA 2021-0002), which analyzed environmental impacts related to the City's Draft HEU of the General Plan. The Draft HEU was prepared as required by State Housing Element law. The City received formal certification of their HEU from the State Department of Housing and Community Development (HCD) on September 12, 2022. On October 4, 2022, the City Council adopted Resolution No. 22-47, approving General Plan Amendment 2022-0002 for the final HEU.

The 2021-2029 Housing Element includes several provisions that aim to ensure the City can meet the required "fair share" of affordable housing units as specified by the HCD. During the Housing Element process, the City assessed a number of sites and areas throughout the community that would be able to accommodate the City's remaining assigned 2021 RHNA. The City identified 19 sites and one housing category (accessory dwelling units [ADUs]/junior accessory dwelling units [JADUs]) as qualifying sites to accommodate the remaining allocated units. Of the 19 sites, Housing Element inventory site 1A, 1B and 2 (Modified Project area), which are within the TLSP, were identified as requiring rezoning under Housing Element Program 1.1a to allow for additional high density residential development.

3.2 PREVIOUS SPECIFIC PLAN AND ENVIRONMENTAL DOCUMENTATION

Specific Plans

The Marine Corps Air Station (MCAS) Tustin Specific Plan was adopted by ordinance on February 3, 2003, and established the zoning for the 1,606-acre TLSP area. It also established the necessary plans, development standards, regulations, infrastructure requirements, design guidelines, and implementation

programs on which subsequent, project-related development is founded. It is intended that local public works projects, design review plans, detailed site plans, grading and building permits, or any other action requiring ministerial or discretionary approval applicable to the project area be consistent with the Specific Plan. The Specific Plan was amended six times between 2010 and 2014 in response to changing market conditions. In 2011, the City developed a "Disposition Strategy" as a recommended framework for future disposition and development of properties in the Specific Plan, which was subsequently updated in February 2023 and re-titled as the "Tustin Legacy Development and Disposition Manual." The last comprehensive CEQA documentation prepared for the TLSP area was the 2017 Supplemental EIR/EIR associated with an amendment to the MCAS Tustin Specific Plan, which renamed the "MCAS Tustin Specific Plan" to "Tustin Legacy Specific Plan" and modified the numbering and land uses in the TLSP planning areas. A number of environmental addenda and tiering documents have also been prepared for projects implemented in the TLSP. The environmental documentation for the more significant implementation actions is described below.

2001 Final Environmental Impact Statement/Environmental Impact Report

A final joint program environmental impact statement/final environmental impact report ("2001 FEIS/EIR," State Clearinghouse [SCH] # 94071005) was prepared for the disposal and reuse of the MCAS Tustin and certified by the Tustin City Council on January 16, 2001 (Resolution 00-90). On March 2, 2001, a Record of Decision was issued by the US Navy approving the 2001 FEIS/EIR and Reuse Plan. The 2001 FEIS/EIR analyzed the consequences of the Navy disposal and local community reuse of the MCAS Tustin site per the Reuse Plan and the MCAS Tustin Specific Plan/Reuse Plan (Adopted Specific Plan or Adopted Project) in accordance with CEQA and the National Environmental Policy Act (NEPA). The 2001 FEIS/EIR covered the entire 1,606 acres of the TLSP area in both Tustin and Irvine. The 2001 FEIS/EIR included implementation actions that the cities were required to fulfill on the MCAS Tustin Specific Plan/Reuse Plan, including the adoption of the MCAS Tustin Specific Plan/Reuse Plan and MCAS Tustin Redevelopment Plan by the City of Tustin. The preferred reuse plan analyzed in the 2001 FEIS/EIR allowed up to 11.4 million square feet (SF) of nonresidential land uses and 4,601 residential units in the cities of Tustin and Irvine. Pursuant to the implementation actions, the Tustin City Council adopted the MCAS Tustin Specific Plan/Reuse Plan on February 3, 2003 (Ordinance No. 1257).

Since certification of the 2001 FEIS/EIR, the City has prepared one supplement and two addenda to the 2001 FEIS/EIR and has certified or adopted multiple CEQA documents for amendments to the MCAS Tustin Specific Plan and development projects in the Tustin Legacy area. The purpose and application of the supplement and addenda are summarized below. The original 2001 FEIS/EIR, the supplement, and the addenda are collectively referred to herein as the "FEIS/EIR."

2004 Supplemental EIR

The "Supplemental EIR to the Final EIS/EIR for the Disposal and Reuse of Marine Corps Air Station, Tustin, California: Extension of Tustin Ranch Road between Walnut Avenue and the Future Alignment of Valencia North Loop Road" ("2004 SEIR," SCH# 1994071005) was certified on December 6, 2004. It analyzed the impacts of a one-mile extension of Tustin Ranch Road from Walnut Avenue (north) to the future alignment of Valencia North Loop Road (south). The segment included an overpass spanning the Orange County Flood Control District right-of-way, the Orange County Transportation Authority/Southern California Regional Rail Authority railroad right-of-way, and Edinger Avenue.

The 2004 SEIR determined that there were no substantial changes in the existing conditions or new significant environmental impacts associated with aesthetics, agriculture resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services/utilities, and recreation. The 2004 SEIR focused on three environmental topics: transportation/traffic, air quality, and noise. Mitigation measures were adopted for all three topic areas. The significant unavoidable adverse impacts remained with respect

to air quality (construction-related and long-term emissions) and traffic (intersections of Tustin Ranch Road/Walnut Avenue and Jamboree Road/Barranca Parkway), and the 2004 SEIR relied on the statement of overriding considerations adopted with certification of the 2001 FEIS/EIR.

2006 Addendum

On April 3, 2006, the City certified the "MCAS Tustin Zone Change (Specific Plan Amendment) 05-002, Master Developer Disposition and Development Agreement, and Development Plan Addendum to the Final Environmental Impact Statement/Environmental Impact Report for the Disposal and Reuse of the MCAS Tustin" (2006 Addendum). The Specific Plan Amendment reduced permitted nonresidential development in the project area by about one million SF to approximately 10.4 million SF of nonresidential uses but retained the same number of residential units—i.e., 4,601. The zone change adjusted the planning area boundaries and redistributed or eliminated planned land uses but did not increase the overall development potential or residential capacity allowed under the Specific Plan. The Disposition and Development agreement was made to facilitate the sale, leasing, and development of Tustin Legacy.

2013 Addendum

An addendum to the FEIS/EIR was prepared to process General Plan Amendment 2013-001, Specific Plan Amendment 2013-001, Development Agreement 2013-002, and an Agreement for Exchange of Real Property between the City and South Orange County Community College District on 22 acres. The land transfer was in the western part of the TLSP area near the intersection of Red Hill Avenue and Valencia Avenue. The project added a new local street, Bell Avenue (now named Victory Road between Red Hill Avenue and Armstrong Avenue), to service adjacent uses; added an allowable land use (private for-profit noneducational uses); and increased allowable building square footages in the education village (Neighborhood A).

2017 Supplemental EIR/EIS

A Supplemental EIR/EIS (SEIR/EIS) was prepared to process the TLSP Amendment (2015-001) and General Plan Amendment (2015-002). The TLSP Amendment was prepared to facilitate development of the remaining undeveloped TLSP area in the City of Tustin. These remaining parcels would be sold, leased, or developed by the City. Eventually these parcels would be developed by a number of landowners within the framework established by the TLSP. Additionally, the TLSP Amendment included changes in land uses for the remaining Planning Areas 8 through 19, which resulted in 2,212 more residential units and 1,755,306 fewer SF of non-residential land use within the Tustin Legacy Specific Plan (TLSP). The TLSP SPA was approved by the City of Tustin on July 18, 2017.

2019 Brookfield Development (The Landing)

In 2019, Resolution No. 19-54 was signed, approving a Tentative Tract Map (TTM) and design review of a multifamily project including 400 condominium units within PA 8, 13, and 14 of Neighborhood D South. The project included 117 single family detached units, 129 townhomes, 154 flats and townhomes, a community facility, and other neighborhood amenities over approximately 107 gross acres. The project was determined to be consistent with the previously approved FEIS/EIR and subsequent CEQA documentation prepared for the project area. This project is partially constructed and is anticipated to be completed in July 2024.

Subsequent Environmental Review

The FEIS/EIR was a Program EIR that was intended as the CEQA compliance for future development consistent with the MCAS Tustin Specific Plan. The FEIS/EIR analyzed a multiyear development period for the planned urban reuse project. As individual development projects were proposed in the TLSP area, the City evaluated and determined whether the environmental impacts of individual activities were fully analyzed in the

FEIS/EIR. The City could approve projects that were within the scope of the project as analyzed by the FEIS/EIR. For projects that are not within the scope of the FEIS/EIR, the City would determine the appropriate level of CEQA review (as discussed in Chapter 1, *Executive Summary*, Section 1.2).

3.3 PROJECT LOCATION

The Tustin Legacy Specific Plan (TLSP) area is in the City of Tustin. The City of Tustin is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east; Santa Ana to the west; and Orange and unincorporated Orange County to the north. Major freeways and highways within or bordering the City of Tustin are the I-5 freeway through the center, State Route (SR) 55 to the west, and SR 261 to the east, as illustrated in Figure 3-1, *Regional Location*.

The TLSP area encompasses approximately 1,606 acres, which includes 1,511 acres in southern Tustin and 95 acres in northeastern Irvine. The TLSP area is generally bounded by Red Hill Avenue to the west, Edinger Avenue to the north, Harvard Avenue to the east, and Barranca Parkway to the south. The local vicinity and the boundary of the TLSP area are illustrated in Figure 3-2, *Local Vicinity*.

The Modified Project site is the portion of the TLSP area that the Project proposes to amend through a Specific Plan Amendment (SPA). The Modified Project site consists of three TLSP subareas spread across two geographically defined areas, referred to as "Neighborhoods" within the TLSP: Neighborhood D (North and South) and Neighborhood G.

- Neighborhood D (PAs 8 and 13-14) encompasses 314 acres. Neighborhood D North is generally bounded by Valencia Avenue to the north, Tustin Ranch Road to the east, Warner Avenue to the south, and Armstrong Avenue to the west. Neighborhood D South is generally bounded by Warner Avenue to the north, Tustin Ranch Road to the east, Barranca Parkway to the south, and Armstrong Avenue to the west. As required by the California Department of Housing and Community Development (HCD), the City identified specific housing sites in its HEU as adequate and available for future residential development consistent with the State's requirements for various income categories. The parcels of Neighborhood D that were identified within the HEU as suitable for future development encompass a total of 84.73 acres within Neighborhood D North and Neighborhood D South. These housing sites included Housing Element (HE) Site 1A, a 39.87-acre within Neighborhood D North, and HE Site 1B, a 44.86-acre site within Neighborhood D South (84.73 acres total). Neighborhood D South was identified in the past two planning HE cycles as suitable for future housing. Neighborhood D North has never been considered for future housing prior to the HEU.
- Neighborhood G (PA 15) encompasses 271 acres. Neighborhood G is in the northeastern portion of the TLSP area. An approximate 50.23-acre undeveloped area within the western portion of the 271-acre Neighborhood G was identified within the HEU as suitable for future residential development. This site was included in Appendix B of the City's HEU as Site 2. Neighborhood G was identified in the previous planning cycle as suitable for future residential development. Neighborhood G is generally bounded by Edinger Avenue to the north, Jamboree Road to the east, Warner Avenue to the south and Tustin Ranch Road to the west.

3.4 EXISTING CONDITIONS

Neighborhood D North is partially developed with the Legacy Magnet Academy in the north portion of the area. The remainder of Neighborhood D North is undeveloped but has been disturbed by prior grading and general infrastructure improvements.

Neighborhood D South is partially developed with a 533-unit apartment complex (Amalfi Apartments) and a residential community consisting of 400 for sale homes (The Landing at Tustin Legacy) in the central portion

of the neighborhood. The remainder of Neighborhood D South is undeveloped but has been disturbed by prior grading and infrastructure improvements.

The southern portion of Neighborhood G is currently developed with single-family and multi-family residential neighborhoods. There is also an existing unpaved surface parking lot in the northern portion of Neighborhood G. The remainder of Neighborhood G is undeveloped but has been disturbed by prior improvements.

The existing land use of the Modified Project site is identified below in Table 3-1, *Surrounding Existing Land Use and Zoning Designations,* and the existing conditions are shown in Figure 3-3, *Aerial View*.

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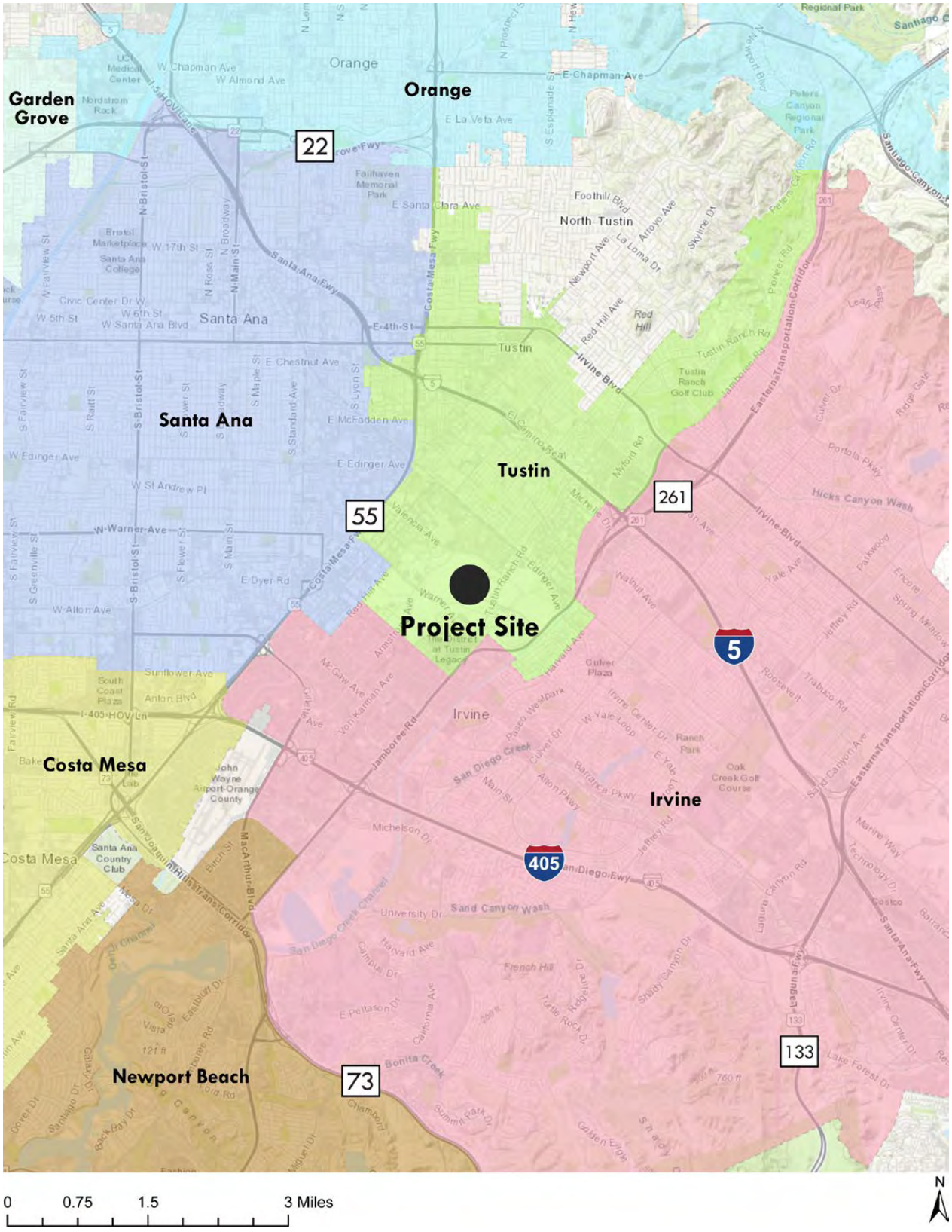
Regional Location



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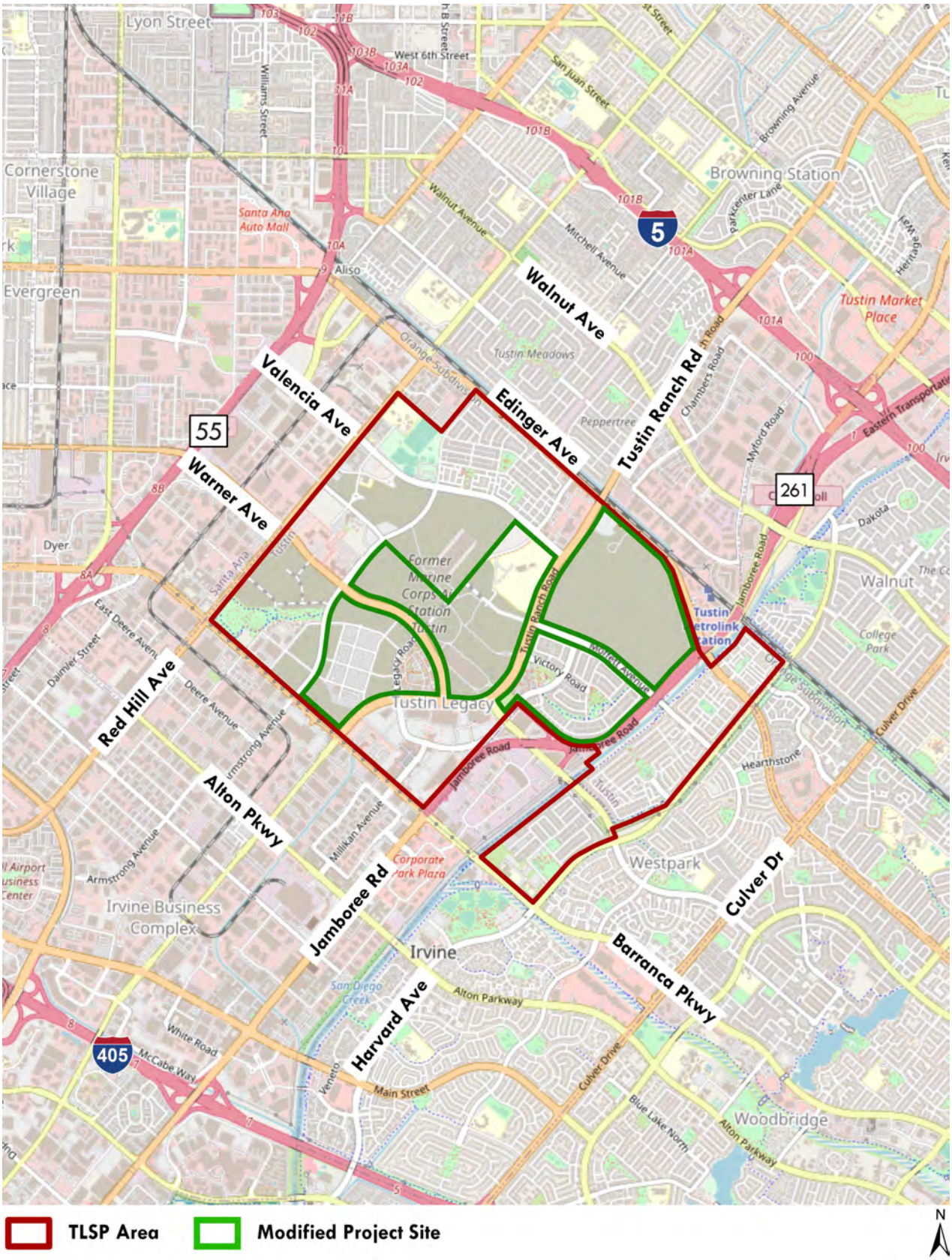
Local Vicinity



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Aerial View

5
55
Walnut Ave
Tustin Ranch Rd
Edinger Ave
Red Hill Ave
Warner Ave
Barranca Pkwy
Harvard Ave
Von Karman Ave
Jamboree Rd
TLSP Area
Modified Project Site
N

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3.4.1 Existing Land Use and Zoning

The TLSP Land Use Plan divides the TLSP area into a collection of neighborhoods, each with their own characteristics and set of functions to perform within the TLSP area. HE Sites 1A and 1B are located in "Neighborhood D" and HE Site 2 is located in "Neighborhood G". The Modified Project site's existing TLSP Neighborhood designations are shown Figure 3-4, *TLSP Neighborhoods*.

The TLSP area, including the Modified Project site, have a General Plan land use designation of TLSP and a zoning designation of SP 1 – Tustin Legacy as shown in Figure 3-*5*, *Existing General Plan Land Use* and Figure 3-6*, Existing Zoning*.

The Land Use Plan for TLSP has been further divided into 13 separate Planning Areas (PA) and a number sub-planning areas, as shown in Figure 3-*7*, *Existing TLSP Land Use Plan*. Neighborhood D includes PAs 8, 13, and 14 and Neighborhood G includes PA 15. Each PA has been assigned a land use designation. PAs categorize the use and development regulations found within the TLSP. The Land Use Plan PA land use designations include Mixed-Use Transit, Mixed-Use Urban, Commercial, Commercial/Business, Residential, Park, Tustin Legacy Park Overlay, Transitional/Emergency Housing, Education Village, and Public Street Right-of-Way (ROW). Specific designations of the Modified Project sites are discussed further below.

Table 3-2 lists the TLSP designations.

Neighborhood D North/Planning Area 8

Neighborhood D North is designated as Mixed-Use Urban with a portion covered by the Tustin Legacy Park Overlay. The TLSP states that the Mixed-Use Urban designation is intended to provide flexibility for a range of uses including hotel, commercial retail, commercial entertainment, public recreation, high school, and residential. The Tustin Legacy Park Overlay designation is intended to be a linear park extending from the corner of PAs 9-12 at Barranca Parkway and Red Hill Avenue in a diagonal direction, to Edinger Avenue in PA 15 complete with a variety of landscape setting such as urban hardscapes and natural softscapes. Neighborhood D North currently provides for a maximum development of 1,547,690 SF nonresidential use (no residential).

Neighborhood D South/Planning Areas 13 & 14

Neighborhood D South is designated as Mixed-Use Urban with a portion of PA 13 covered by the Tustin Legacy Park Overlay. The TLSP states that the Mixed-Use Urban designation is intended to provide flexibility for a range of uses including hotel, commercial retail, commercial entertainment, public recreation, high school, and residential. According to the TLSP, Neighborhood D South currently provides for a maximum development of 1,672 dwelling units and 606,000 SF of nonresidential uses.

Neighborhood G/Planning Area 15

PA 15 is designated as Mixed-Use Transit with a portion covered by the Tustin Legacy Park Overlay. According to TLSP, the Mixed-Use Transit designation is intended to provide for transit-oriented, mixed-use developments with residential, office, commercial retail, and commercial service uses in a vertical or horizontal configuration. PA 15 is located across from the Tustin Metrolink Station and is envisioned as the transit-oriented, residential core of Tustin Legacy. Neighborhood G currently provides a development maximum of 2,814 dwelling units and 1,095,200 SF of nonresidential uses.

3.4.2 Surrounding General Plan and Zoning Designations

The surrounding land uses (within Tustin) are shown on Figure 3-*5*, *Existing General Plan Land Use*, and Figure 3-6, *Existing Zoning*. The Modified Project site is generally surrounded to the west by commercial and industrial uses; to the north by single-family residential uses and industrial and commercial uses; to the east by single-family residential and multi-family residential uses; and to the south by commercial and industrial uses. Additional details are provided in Table 3-1, below.

Table 3-1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
Northwest (Tustin)	**Surrounding Modified Project site:** ATEP Irvine Valley College IDEA Orange County Rescue Mission Armed Forces Reserve Center Sheriff Regional Training Center **Surrounding TLSP area:** Business commercial, warehousing & offices	**Surrounding Modified Project site:** TLSP – Tustin Legacy Specific plan (Neighborhoods A, B & C) **Surrounding TLSP area:** Planned Community Commercial Business (PCCB) Industrial (I)	**Surrounding Modified Project site:** PA 1 & 3– Education Village PA 2 & 6 – Park PA 4-5 – Residential **Surrounding TLSP area:** Planned Community Commercial (PC COM)/ Pacific Center East (SP11) Planned Community Industrial (PC IND)/International Rectifier (SP3) Industrial (M)
Northeast (Tustin)	**Surrounding Modified Project site:** Coventry Court Luxury Senior Apartments (MFR) Columbus Square Residential (MFR) The Village at Tustin Legacy (commercial center) **Surrounding TLSP area:** Metrolink train tracks/station OCFCD Santa Ana/Santa Fe Channel (stormwater) Tustin Meadows & Peppertree Single Family residential (SFR) Warehousing, offices and parks	**Surrounding Modified Project site:** TLSP – Tustin Legacy Specific plan (Neighborhood B & G) **Surrounding TLSP area:** Planned Community Residential (PCR) Planned Community Commercial Business (PCCB)	**Surrounding Modified Project site:** PA 7 – Commercial PA 20 - Residential **Surrounding TLSP area:** Planned Community Residential (PC RES) Planned Community Industrial (PC IND)
Southwest (Tustin & Irvine)	**Surrounding Modified Project site:** Flight at Tustin Legacy (office and restaurant) The District at Tustin Legacy (commercial center) City facility & Emergency Shelter **Surrounding TLSP area:** Restaurants, retail, offices, industrial & storage	**Surrounding Modified Project site:** TLSP – Tustin Legacy Specific plan (Neighborhood E & F) **Surrounding TLSP area:** PA 36, Irvine Business Complex - Urban & Industrial	**Surrounding Modified Project site:** PA 9-12 – Commercial/ Business PA 16-19 – Commercial **Surrounding TLSP area:** PA 36, Irvine Business Complex: IBC Multi-Use
Southeast (Tustin & Irvine)	**Surrounding Modified Project site:** Tustin Field Residential (MFR &SFR) Columbus Grove (SFR) Parks The District at Tustin Legacy (commercial center) **Surrounding TLSP area:**	**Surrounding Modified Project site:** TLSP – Tustin Legacy Specific plan (Neighborhood G& H) **Surrounding TLSP area:**	**Surrounding Modified Project site:** PA 21 & 22 – Residential **Surrounding TLSP area:**

	Existing Land Use	General Plan Designation	Zoning Designation
	Culver Plaza Shopping Center OC Succulents Nursery Creekside Education Center Industrial, office, parks and single & multi-family residential uses	PA 38, Westpark II - Medium & Medium-High Density Residential PA 36, Irvine Business Complex - Urban & Industrial	PA 38, Westpark II: - Medium Density Residential & Medium-High Density Residential PA 36, Irvine Business Complex: IBC Industrial

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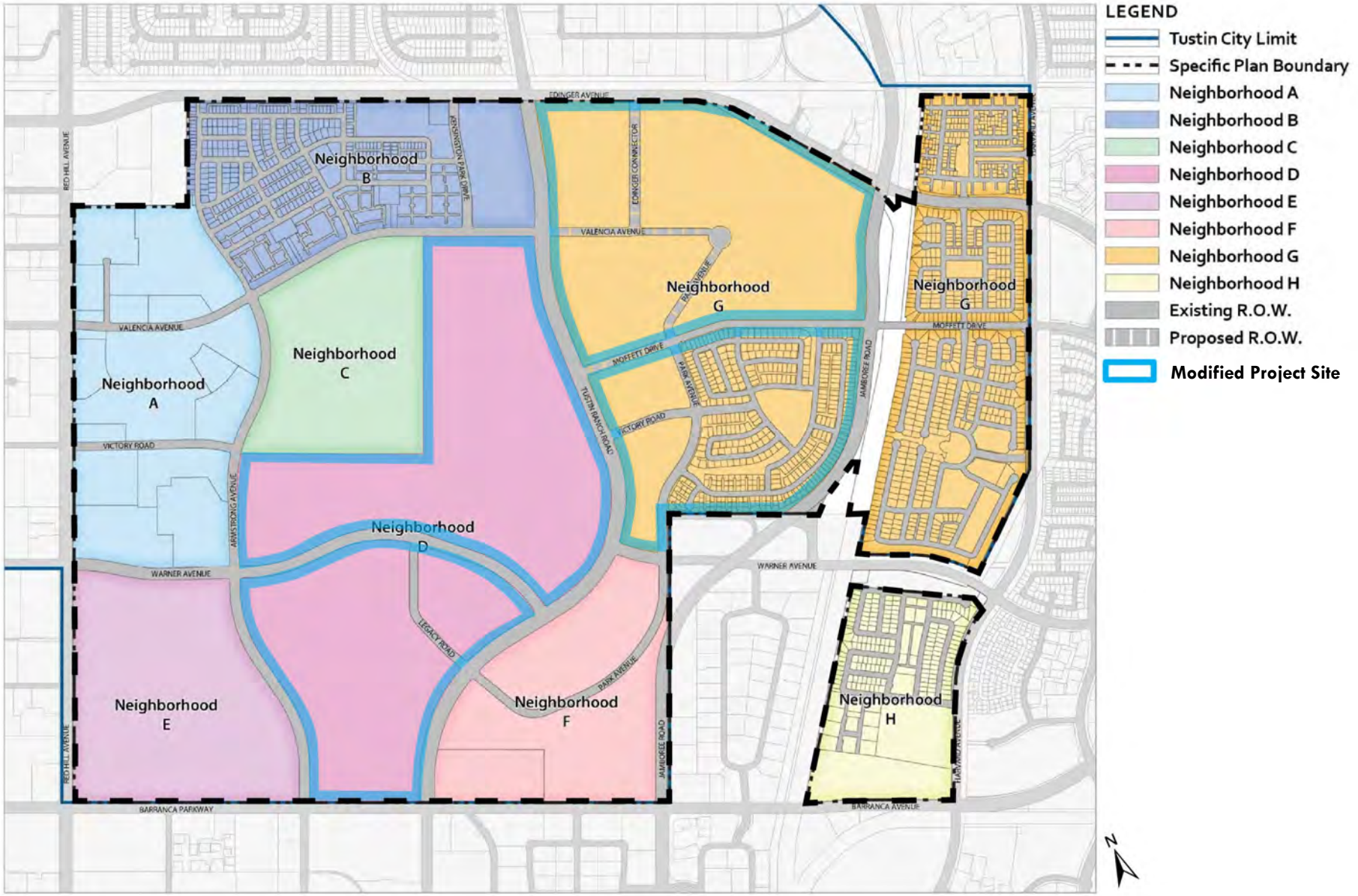
TLSP Neighborhoods



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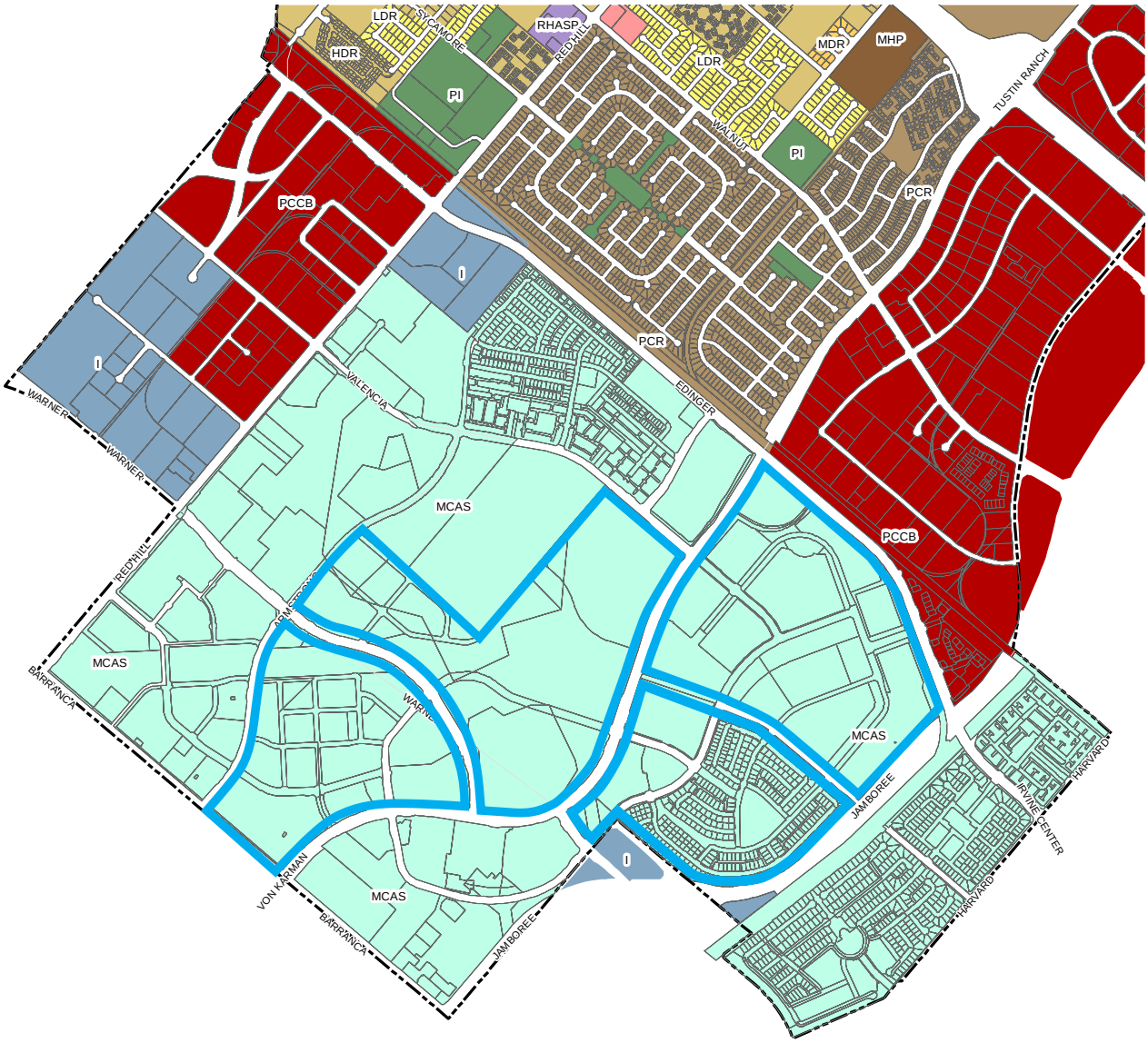
Existing General Plan Land Use Designation



Modified Project Site

TLSP - Tustin Legacy Specific Plan

I - Industrial

PCCB - Planned Community Commercial/Business

PCR - Planned Community Residential

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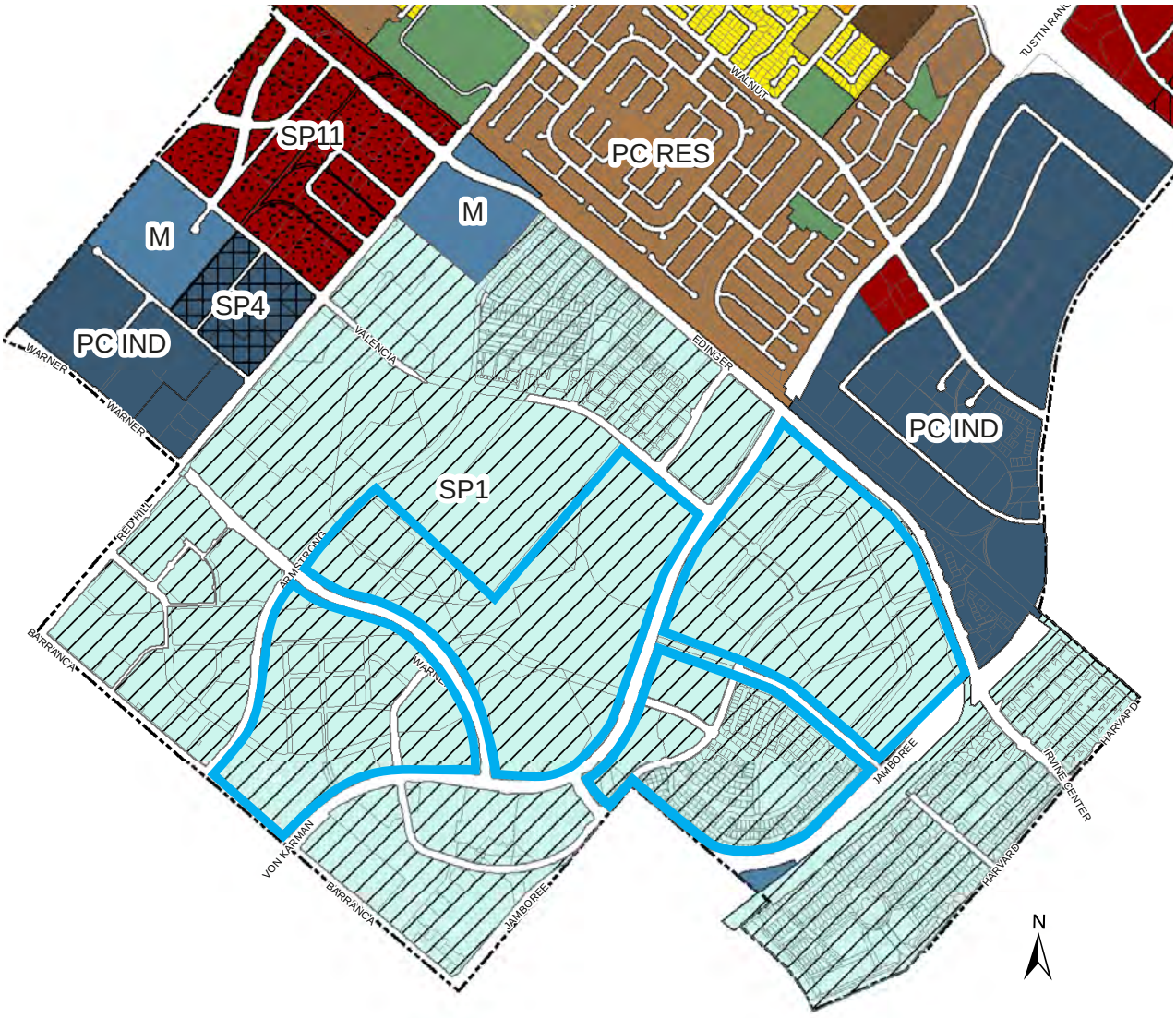
Existing Zoning



Modified Project Site

- R1 - Single Family Residential
- R2 - Duplex Residential
- R3 - Multiple Family Residential
- R4 - Suburban Residential
- PC RES - Planned Community Residential
- PD - Planned Development
- MHP - Mobile Home Park
- PR - Professional
- C1 - Retail Commercial
- C2 - Central Commercial
- CG - Commercial General
- PC COM - Planned Community Commercial
- PM - Planned Industrial
- M - Industrial
- PC IND - Planned Community Industrial
- PI - Public and Institutional
- PCPI - Planned Community Public and Institutional
- SP 1 - Tustin Legacy
- SP 3 - International Rectifier
- SP 4 - Tustin Plaza
- SP 6 - Holt Warren
- SP 8 - East Tustin
- SP 9 - Yorba Street
- SP 11 - Pacific Center East
- SP 12 - Downtown Commercial Core
- SP 13 - Red Hill Avenue

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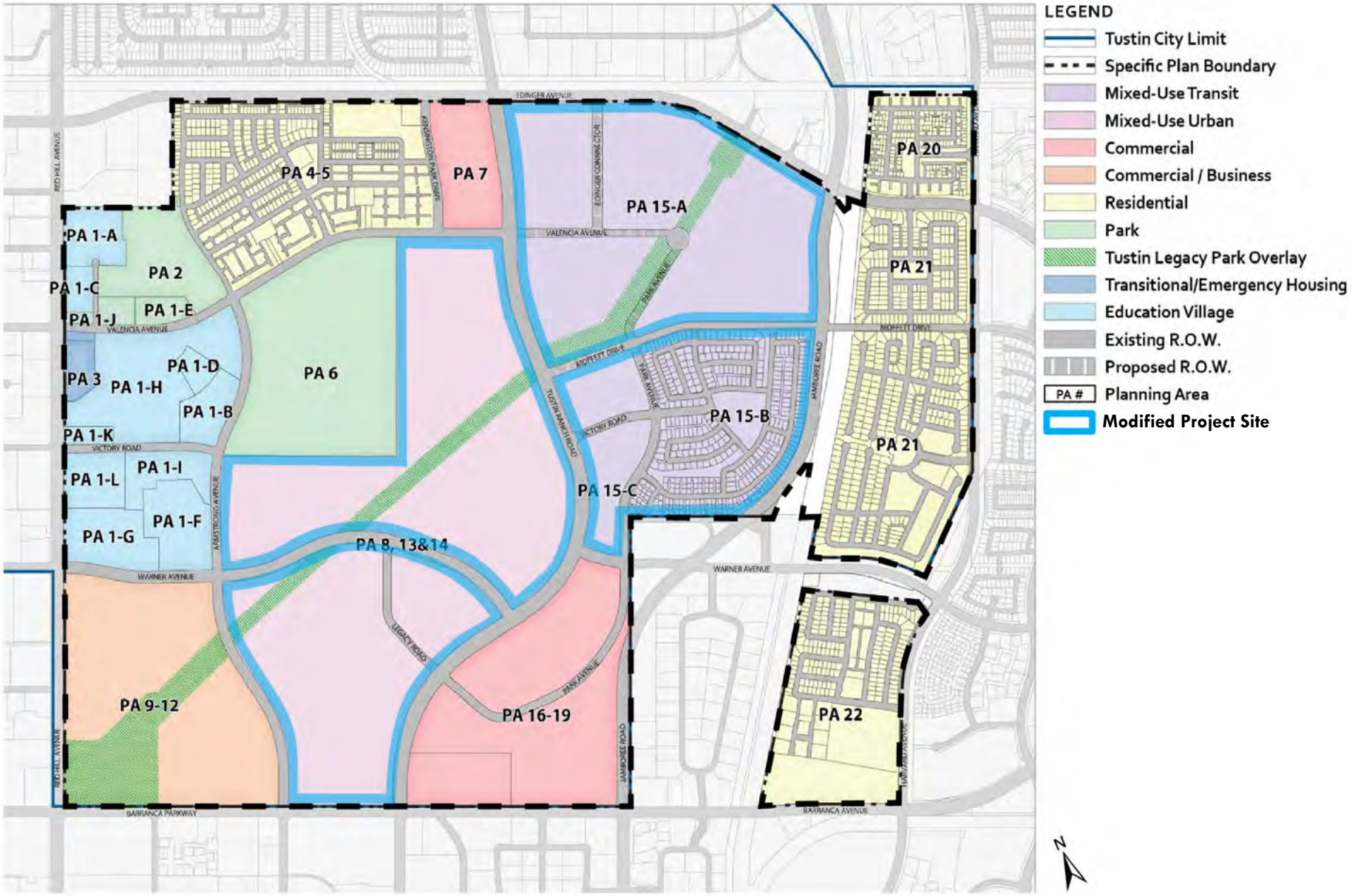
Existing Tustin Legacy Specific Plan Designation



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3.5 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (Title 14 California Code of Regulations [CCR]) requires "A statement of objectives sought by the proposed project. A clearly written statement of objectives would help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and would aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project." The proposed TLSP amendment outlines a variety of "Guiding Principles" and related goals that form the objectives of the Modified Project, including the following:

- Implement Program 1.1a of the 6th Cycle HEU to provide for the opportunity for future residential development on three sites in the TLSP as identified by the City's HEU, with a minimum density of 20 units per acre (du/acre) on the selected sites.
- Reposition the remaining undeveloped lands in Planning Areas 8, 13, 14 & 15 to allow increased capacity for residential development and to accommodate various levels of affordability.
- Provide for the streamlining of residential development to accommodate various levels of affordability through implementation of clear and objective design standards.
- Amend the TLSP to be consistent with existing State housing law, including the provision for State density bonus.

3.6 DESCRIPTION OF THE PROJECT

3.6.1 Project Overview

The TLSP identifies a dwelling unit and nonresidential square footage "cap" for each neighborhood, as opposed to application of traditional density and floor area ratio standards. This allows for greater flexibility in future development of the TLSP area. The proposed TLSP Specific Plan Amendment (SPA) would amend Neighborhood D South, D North, and G to increase the allowed residential capacity, as shown in Table 3-2, to be consistent with the certified HEU.

The proposed "upzoning," or "cap" increase, would add a total of 855 additional residential units to the existing residential capacity of the Modified Project site (Neighborhoods D and G). The capacity increase would also include 1,356 "buffer units" that were assigned in the City's HEU and are intended to make up for any potential units that are not developed as assumed under the HEU on other housing sites. Therefore, a total of 2,211 units have been added to the existing residential cap of the TLSP within Neighborhoods D and G.

The provision for State density bonus is applicable to the TLSP area. Therefore, an additional 2,759 units have been conservatively included in this analysis to anticipate the potential application of density bonuses in future residential development projects.

Together, the HEU RHNA units, buffer units, and density bonus units total an increase of 4,970 units to the TLSP area that are analyzed in this DSEIR as the Modified Project.

3.6.2 Proposed Specific Plan Amendment

The Modified Project is an SPA to the TLSP to increase allowed capacity for the future development of residential units within Neighborhood D South, Neighborhood D North, and Neighborhood G, consistent with the approved HEU of the Tustin General Plan. Proposed additional capacity would include the housing units allocated the TLSP to accommodate the City's RHNA, buffer units included as part of the HEU, and density bonus units available to developers under the Surplus Land Act and State density bonus law. Density bonus

is applicable to all undeveloped residential land uses within the TLSP area, including the newly added 6th cycle RHNA units, as well as the remaining buildout capacity of the existing residential land uses within the TLSP area.

Neighborhood D North/Planning Area 8

Neighborhood D (PA 8, 13 &14) within the TLSP is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment. According to the approved TLSP, Neighborhood D North has no residential units allocated.

The 39.87-acre portion of Neighborhood D North identified for housing capacity within the HEU includes Assessor's Parcel Numbers (APNs) 430-381-38, -41, -91, and -95 (see Figure 3-8, *2021-2029 Housing Element Sites)*. The Modified Project would add 555 dwelling units to Neighborhood D buildout capacity, consistent with the adopted HEU.

Per Government Code Section 65583.2(h), where the inventory of City sites does not identify adequate sites to accommodate the City's RHNA for lower income households, the Housing Element must include a program to rezone additional adequate sites that can be developed for housing within the planning period and that are sufficient to accommodate 100 percent of the shortfall of sites necessary to accommodate the remaining housing need for very low-income and low-income households (i.e., lower-income households). Further, rezone sites needed to accommodate a lower-income shortfall must comply with the following requirements set forth in Government Code Section 65583.2(h):

- Permit owner-occupied and rental multifamily uses by right for developments in which twenty (20) percent or more of the units are affordable to lower income households. "By right" means local government review must not require a conditional use permit, planned unit development permit, or other discretionary review or approval.
- Permit the development of at least sixteen (16) units per site.
- Ensure the sites allow a minimum of twenty (20) dwelling units per acre.
- Ensure a) at least fifty (50) percent of the shortfall of low- and very low-income regional housing need can be accommodated on sites designated for exclusively residential uses, or b) if accommodating more than fifty (50) percent of the low and very low-income regional housing need on sites designated for mixed-uses, all sites designated for mixed-uses must allow 100 percent residential use and require residential use to occupy at least fifty (50) percent of the floor area in a mixed-use project.

Housing units added to the TLSP area to accommodate the City's RHNA, shown in Table 3-2 below, are considered "shortfall sites" subject to the requirements of Government Code Section 65583.2(h). In order to comply with the requirements of Government Code Section 65583.2(h), the City has identified a portion of Neighborhood D North (APNs 430-381-41 and 430-381-91) to be zoned as exclusively residential land use (i.e., would not allow for future mixed-use or nonresidential development) (see Figure 3-9, *Proposed Rezone*). These parcels would accommodate a minimum of 203 units. Therefore, the Project would include as part of the SPA, the designation of APNs 430-381-41 and 430-381-91 exclusively for residential land uses, such that, nonresidential uses are prohibited. The remaining parcels, 430-381-38 and -95, would accommodate 352 dwelling units (555 total units), which could be constructed as standalone residential or mixed-use projects.

In addition to the 555 units required for the City to meet their RHNA shortfall, 1,356 buffer units were allocated to Neighborhood D North. Buffer units were incorporated as contingency in the event that the City is unable to meet its RHNA obligation on other designated housing sites during the 2021-2029 planning period. These units would be incorporated to the TLSP housing caps, and residential capacities would be

updated for Neighborhoods D North accordingly under the TLSP SPA, providing a total residential maximum buildout of 1,911 units (555 units + 1,356 buffer units).

Neighborhood D South/Planning Areas 13 & 14

Neighborhood D South (PA 13 &14) is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment. The Approved Project (2017 TLSP) designated Neighborhood D South to accommodate 1,672 residential units. Then the 2021-2029 Housing Element added 100 units to Neighborhood D South, increasing the total residential capacity of Neighborhood D South to from 1,672 to 1,772. The portion of Neighborhood D South identified for this increased housing capacity includes South Brookfield Tract 18197, Lot 2 and Lots 5-13 (see Figure 3-8, *2021-2029 Housing Element Sites*).

Neighborhood G/Planning Area 15

Neighborhood G (PA 15) within the TLSP is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment, mixed-use transit-oriented development and residential uses. A maximum of 2,814 dwelling units and 1,095,200 square feet of nonresidential uses are the identified maximum capacities in Neighborhood G. The Mixed-Use Transit designation provides flexibility for residential, office, commercial retail, and commercial service uses in a vertical or horizontal configuration. This Planning Area also contains a portion of the Tustin Legacy Park Overlay.

The portion of Neighborhood G identified for increased housing capacity within the 2021-2029 Housing Element includes APNs 430-381-27 to -29, 430-391-03, -27, -28, -56, -59 to -64 (see Figure 3-8, *2021-2029 Housing Element Sites*). The Modified Project would add 200 dwelling units to the Neighborhood G buildout, increasing the capacity from 2,814 to 3,014 residential units.

Nonresidential Uses of TLSP

In addition to the proposed changes above, the TLSP nonresidential land use breakdown used for modeling and trip budgets of the Approved Project have been updated for the Modified Project analysis. These changes have been made to reflect a series of factors, including entitled/built projects, forecasted market conditions, and anticipated future development. Changes to the proposed nonresidential land use breakdown would not require an SPA since proposed land uses would fit within existing nonresidential development caps and allowed uses of each of the PAs and neighborhoods. The land use breakdown is used strictly for trip budgeting and modeling purposes. Overall, the changes amongst the various nonresidential land uses would result in no net change in nonresidential square footage (see Table 3-2 below). Notable changes include a reduction in future hotel uses and an increase in continuing care/senior housing land use in Neighborhood D South, a reduction in community commercial uses and increase in office uses in Neighborhood D North, and a reduction in continuing care (senior housing) uses and increase in community commercial and office uses in Neighborhood G.

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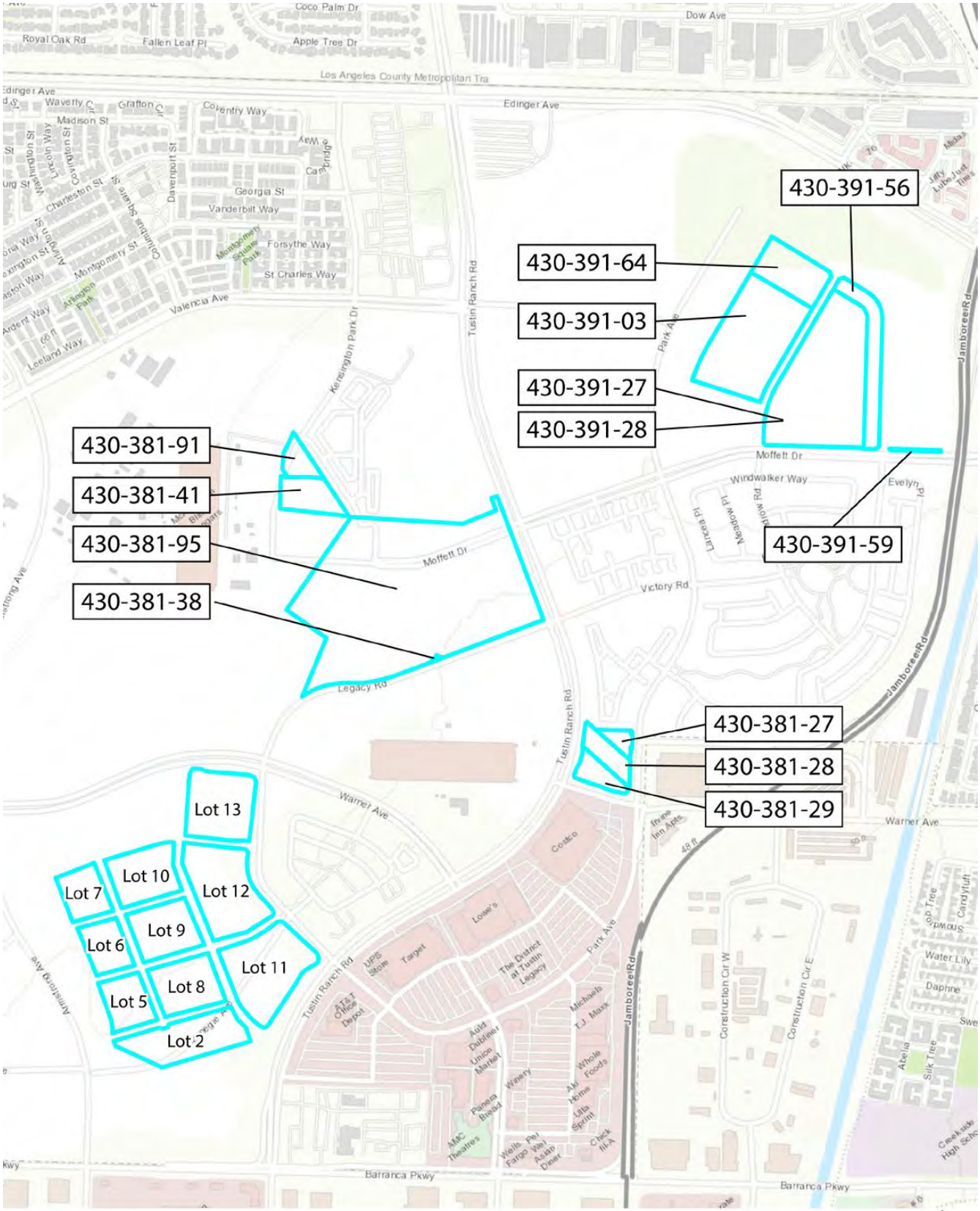
2021-2029 Housing Element Sites



Tustin Legacy Specific Plan Amendment SEIR
City of Tustin

Figure 3-8

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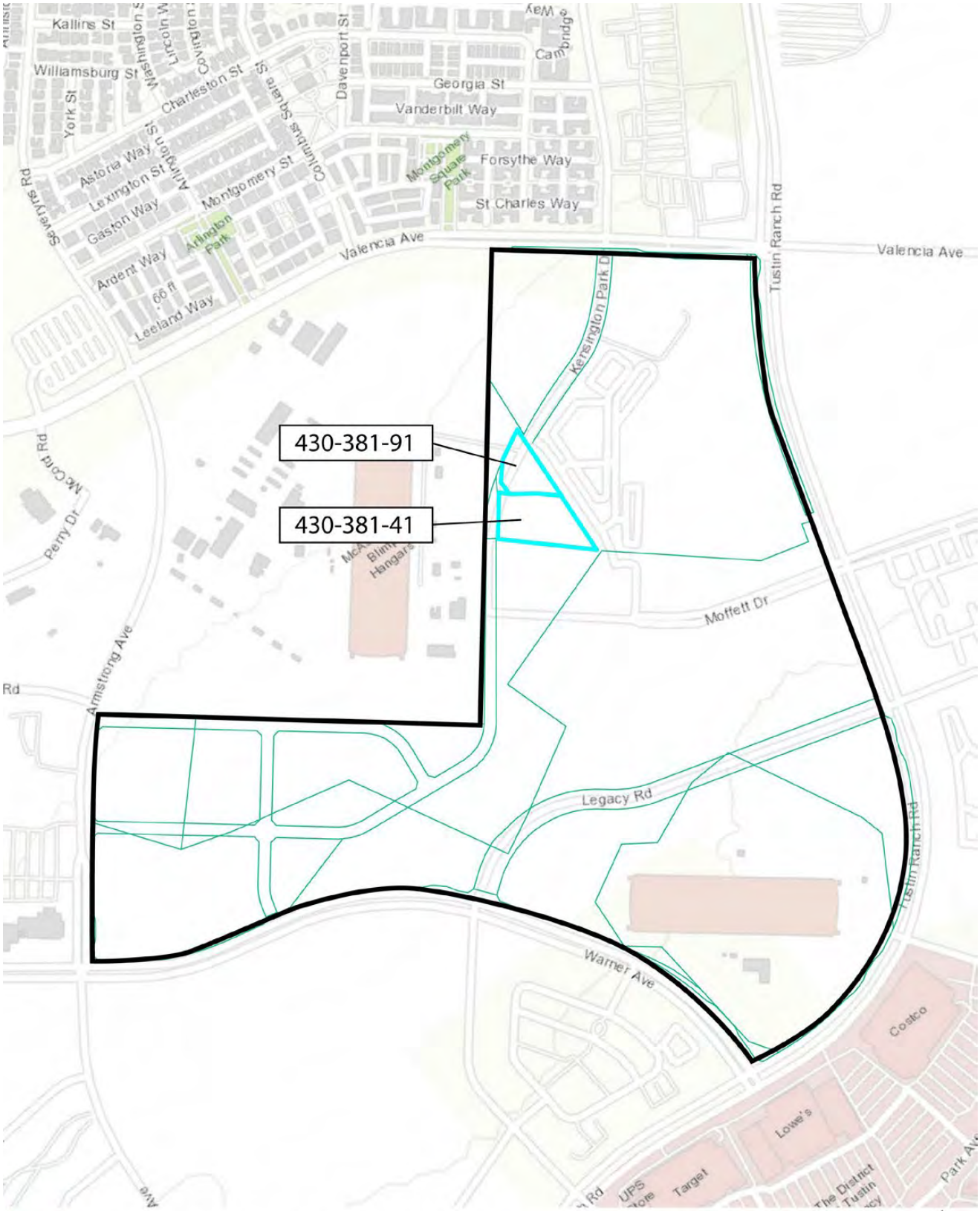
Proposed Rezone



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3.6.3 Specific Plan Amendment Buildout

Individual sites, or neighborhoods, within the TLSP do not have minimum or maximum densities; however, there is a development cap on the number of housing units in each of the neighborhoods.

The current 2017 TLSP identifies a total capacity of 6,813 residential units and 9,532,419 SF of nonresidential capacity within the entire TLSP area (see Table 3-2, *Specific Plan Amendment Summary*). The proposed TLSP SPA identifies a total capacity of 9,024 residential units and 9,532,419 SF of nonresidential capacity within the TLSP area (see Table 3-2, *Specific Plan Amendment Summary*).

Currently, within the Modified Project site (neighborhoods D and G), the 2017 TLSP identifies a total of 4,486 residential units and 3,248,890 SF of nonresidential capacity (see Table 3-3*, Comparison of Approved Project to Modified Project*). The proposed Modified Project identifies a total capacity of 6,697 residential units and 3,248,890 SF of nonresidential capacity (see Table 3-3*, Comparison of Approved Project to Modified Project*).

While the proposed SPA would increase the residential capacity by 2,211 units, the provision for density bonuses under State law is appliable to the Modified Project site as well. If existing density bonuses are applied to the proposed residential capacity under the SPA, an additional 2,759 units would need to be accommodated. As a result, the proposed allowed residential capacity increase of 2,211 and the potential of 2,759 density bonus units, for a total of 4,970 units, are conservatively analyzed throughout the environmental documentation for the Modified Project.

Changes in residential and nonresidential development capacity between the Approved Project and proposed Modified Project are listed in Table 3-3, *Comparison of Approved Project to Modified Project*. Although a specific development project is not proposed, for analysis purposes, the proposed SPA buildout year is assumed to be 2045.

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Table 3-2: Specific Plan Amendment Summary

PA	Land Use	Specific Plan Acres	Adopted Specific Plan		Proposed Amended Specific Plan		Difference (Proposed – Current)	Built/Approved		Remaining	
			Max Residential Units	Max Non-Residential Sq. Ft.	Max Residential Units	Max Non-Residential Sq. Ft.		Residential	Non-Residential	Residential	Non-Residential
1	Education Village	120	-	2,254,200	-	2,254,200	No Change	-	210,564	-	2,043,636
2	Community Park	29	-	1,000	-	1,000	No Change	-	2,000	-	(1,000)
3	Transitional/ Emergency Housing	5	-	387 133,294	-	387 133,294	No Change	-	387 133,294	0	0
4–5	Residential	106	895	-	895	-	No Change	895	-	0	0
6	Regional Park	85	-	574,992	-	574,992	No Change	-	-	-	574,992
7	Commercial	21	-	248,292	-	248,292	No Change	-	248,292	-	0
8 (D North)	Recreation/ Entertainment Core	190	-	1,547,690	1,911	1,547,690	1,911 DU No Change Sq. Ft.	-	-	1,911	1,547,690
9–12	Commercial/ Business	117	-	1,588,198	-	1,588,198	No Change	-	385,937	-	1,202,225
13-14 (D South)	Mixed-Use Urban	124	1,672	606,000	1,772	606,000	100 DU No Change Sq. Ft.	776	-	996	606,000
15 (G west)	Mixed-Use Transit	271	2,814	1,095,200	3,014	1,095,200	200 DU No Change Sq. Ft.	785	-	2,229	1,095,200
16–19	Commercial	103	-	1,483,553	-	1,483,553	No Change	-	1,016,000	-	467,553
20	Residential	29	376	-	376	-	No Change	376	-	0	
21	Residential	127	654	-	654	-	No Change	654	-	0	
22	Residential	73	402	-	402	-	No Change	**402**	-	**0**	
	ROW	**206**					**-**			**0**	
Total		**1,606**	**6,813**	**9,532,419**	**9,024**	**9,532,419**	**2,212 DU (1,755,306) Sq. Ft.**	**3,888**	**1,996,087**	**5,136**	**7,536,296**

Table 3-3: Comparison of Approved Project to Modified Project

Land Use	Unit	Neighborhood D South (PA 13 & 14)		Neighborhood D North (PA 8)		Neighborhood G (PA 15)		Approved Total	Proposed Total	Modified Project - Approved Project
		Approved Project[1]	Modified Project	Approved Project[1]	Modified Project[2]	Approved Project[1]	Modified Project			
Single Family Housing	DU	-	117	-	-	-	692	-	809	809
Multi-Family Housing	DU	1,672	1,655	-	1,911	2,814	2,322	4,486	5,888	1,402
Hotel	SF	165,600	36,000	-	36,000	-	-	165,600	72,000	(93,600)
Neighborhood Commercial	SF	-	-	-	-	95,200	-	95,200	-	(95,200)
Community Commercial	SF	20,400	10,000	1,547,690	1,038,690	-	36,500	1,568,090	1,085,190	(482,900)
Office	SF	420,000	443,000	-	473,000	-	704,700	420,000	1,620,700	1,200,700
Continuing Care - Senior Housing	SF	-	117,000	-	-	1,000,000	354,000	1,000,000	471,000	(529,000)
High School	STU	-	-	1,784	1,784	-	-	1,784	1,784	-
Park - Legacy Park (Passive)	AC	6	6	54	54	31	31	91.0	91.0	-
Park - Sports Park (Active)	AC	-	-	45	45	-	-	45.0	45.0	-
Total Residential	**DU**	**1,672**	**1,772**	**-**	**1,911**	**2,814**	**3,014**	**4,486**	**6,697**	**2,211**
Total Nonresidential	**SF**	**606,000**	**606,000**	**1,547,690**	**1,547,690**	**1,095,200**	**1,095,200**	**3,248,890**	**3,248,890**	**-**
Density Bonus	*DU*	-	655	-	956	-	1,148	-	2,759	2,759
Potential Residential Buildout w/ Density Bonus	**DU**	**1,672**	**2,427**	**-**	**2,867**	**2,814**	**4,162**	**4,486**	**9,456**	**4,970**

[1]Approved Project refers to the 2017 Specific Plan Amendment to the TLSP.
[2] Neighborhood D North includes 1,356 buffer units.
DU = dwelling units, SF = square feet, STU = number of students, AC = acres

3.6.4 Construction Assumptions

Roadways and utilities may be required to support development of projects under the proposed SPA. Future onsite infrastructure improvements that may be necessary for residential development within the TLSP area would include storm drains, wastewater, water (potable and reclaimed), and dry utilities that would connect to existing facilities within or adjacent to the Modified Project site. Specific infrastructure improvements required to support residential development within the TLSP area are not known at this time and will not be known until a development project is proposed.

For purposes of this analysis, several assumptions have been made regarding the construction of future projects. Future development of the additional 4,970 units associated with the proposed Project has been assumed to occur anytime between October 2024 and October 2029. No demolition of existing buildings has been assumed as part of the analysis.

3.7 DISCRETIONARY APPROVALS AND PERMITS

The City of Tustin has primary approval responsibility for the proposed TLSP Amendment. As such, the City serves as the Lead Agency for this SEIR pursuant to CEQA Guidelines §15050. The City of Tustin Planning Commission will evaluate this SEIR and the proposed TLSP Amendment and make a recommendation to the City Council whether the TLSP Amendment should be adopted and the SEIR be certified. The City Council is the decision-making authority for the Project and will consider the Project along with the Planning Commission's recommendation, the information in the SEIR and the Project's administrative record. The City Council will make a final decision to approve, approve with changes, or deny the Project. In the event of approval of the Project and certification of the SEIR, the City would later conduct administrative and discretionary reviews and grant ministerial and discretionary permits and approvals to implement Project requirements, conditions of approval, and future developments within the TLSP. Approval and implementation of the proposed TLSP Amendment requires City approval of the following discretionary actions:

City of Tustin

- Certification of the SEIR;
- Adoption of the TLSP amendment to increase the allowed units in Neighborhood D and a portion of Neighborhood G; and
- Adoption of citywide Objective Design Standards.

Potential future discretionary actions include, but are not limited to:

- Exclusive Negotiating Agreements (ENAs);
- Disposition and Development Agreements;
- Residential Density Bonuses; and/or
- Development Agreements.

As part of the proposed Project, subsequent approvals are anticipated to be requested from the following responsible agencies:

- Airport Land Use Commission;
- Tustin Unified School District;
- Santa Ana Unified School District (potentially, for a portion of Neighborhood D South);
- South Orange County Community College District; and/or
- Approval of a Water Supply Assessment from Irvine Ranch Water District.

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4. Environmental Setting

4.1 PHYSICAL ENVIRONMENTAL CONDITIONS

CEQA Guidelines Section 15125(a)(1) states that the physical environmental condition in the vicinity of the Project as it existed at the time the EIR's NOP was released for public review normally be used as the comparative baseline for the EIR. The NOP for this EIR was released for public review on March 4, 2024. The following pages include a description of the physical environmental conditions ("existing conditions") on a regional and local basis at the approximate time the NOP was released. More information regarding the Project site's environmental setting per topic area is provided in the subsections of Section 5, *Environmental Analysis*.

4.1.1 Air Quality

The City of Tustin is located within the South Coast Air Basin (Basin), which is under the jurisdiction of the SCAQMD. The Basin is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County.

The ambient concentrations of air pollutants are determined by the amount of emissions released by sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the volume of emissions released by existing air pollutant sources.

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The topography and climate of Southern California combine to make the Basin an area of high air pollution potential. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is disrupted occasionally by periods of extremely hot weather, winter storms, or Tustin winds. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions which produce ozone.

Existing Conditions

SCAQMD maintains monitoring stations within district boundaries that monitor air quality and compliance with associated ambient standards. The Project site is located within the monitoring boundary of the Anaheim-Pampas Lane monitoring station (SRA 17), located at 1630 Pampas Lane in Anaheim, which is approximately 14 miles northwest of the TLSP area. The most recent 3 years of data is shown in Table 5.1-2, *Air Quality Monitoring Summary 2020-2022*, in Section 5.1, *Air Quality*, and identifies the number of days ambient air quality standards were exceeded in the area. The federal PM_{10} standard had no exceedances. The state PM_{10} standard was exceeded five times in 2020, one time in 2021, and one time in 2022. The federal $PM_{2.5}$ standard had 12 exceedances in 2020, 10 exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standard was exceeded six times in 2021, no times in 2021, and once in 2022. The State 8-

hour ozone standard was exceeded 16 times in 2020, no times in 2021, and once in 2022. The federal 8-hour standard was exceeded 15 times in 2021, no times in 2021, and once in 2022. The CO and NO_2 standards were not exceeded in this area during the 3-year period.

Sensitive Land Uses

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered more sensitive to poor air quality than the general public because the population groups associated with these uses have increased susceptibility to respiratory distress. In addition, residential uses are considered more sensitive to air quality conditions than commercial and industrial uses, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation.

Existing offsite sensitive air quality receptors, where someone can remain for 24-hours in the vicinity of the Project site, consists of residences. The closest existing sensitive receptors are residences, The Bowery, located approximately 140 feet west of the TLSP boundary. However, in consideration that buildout of the TLSP has and will continue to occur over multiple phases, future sensitive receptors within 50 feet of the Modified Project site have been conservatively considered for analysis of the Modified Project site (to account of existing and future onsite and offsite receptors).

4.1.2 Energy

Electricity

The Southern California Edison Company (SCE) is the electrical purveyor in the City of Tustin. SCE provides electricity service to more than 15 million people in a 50,000 square-mile area of central, coastal and Southern California. California utilities are experiencing increasing demands that require modernization of the electric distribution grid to, among other things, accommodate two-way flows of electricity and increase the grid's capacity. SCE is in the process of implementing infrastructure upgrades to ensure the ability to meet future demands. In addition, as described by the Edison International 2022 Annual Report, the SCE electrical grid modernization effort supports implementation of California requirements to achieve carbon neutrality by 2045. The state has set Renewables Portfolio Standards that require retail sellers of electricity to provide 60 percent of power from renewable resources by 2030. The state also requires sellers of electricity to deliver 100 percent of retail sales from carbon-free sources by 2045, including interim targets of 90 percent by 2035 and 95 percent by 2040. In 2022, approximately 49 percent of power that SCE delivered to customers came from carbon-free resources (Southern California Edison, 2023).

According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2022 was 85,870 GWh (31,604 GWh for the residential sector and 54,266 GWh for the non-residential sector). Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kilowatt hours [kWh]), including 7,830 GWh for the residential sector and 12,414 GWh for the non-residential sector.

The TLSP area is currently served by the electricity distribution system that exists along the roadways within and adjacent to the area.

Natural Gas

The Southern California Gas Company (SoCalGas) is the natural gas purveyor in the City of Tustin and is the principal distributor of natural gas in Southern California. SoCalGas provides natural gas to

approximately 21.8 million people in a 24,000 square mile service area throughout Central and Southern California. The gas supply available to SoCalGas is regionally diverse and includes supplies from California sources (onshore and offshore), Southwestern U.S. supply sources, the Rocky Mountains, and Canada (SoCalGas, 2023). SoCalGas designs its facilities and supplies to provide continuous service during extreme peak demands and has identified the ability to meet peak demands through 2035 (SoCalGas, 2023).

According to the CEC, total natural gas consumption in the SoCalGas service area in 2022 was 5,026 million therms (2,230 million therms for the residential sector). Total natural gas consumption in Orange County in 2021 was 573 million therms (572,454,744 therms), including 352 million therms for the residential sector and 221 million therms for the non-residential sector.

The TLSP area is currently served by the natural gas distribution system that exists within the roadways in and adjacent to the Project area.

Fuel

The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.9 mpg in 2021 (United States Department of Transportation, 2024). Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. This act, which originally mandated a national fuel economy standard of 35 mpg by year 2020, applies to cars and light trucks of Model Years 2011 through 2020 (United States Department of Energy, 2007). In March 2020, the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks, further detailed below.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, in 2021, total gasoline consumption in California was 289,918 thousand barrels (12.2 billion gallons) or 1,464.7 trillion British Thermal Units (BTU). Of the total gasoline consumption, 273,289 thousand barrels (11.5 billion gallons) or 1,380.7 trillion BTU were consumed for transportation (United States Energy Information Administration, 2024). Based on fuel consumption obtained from CARB's California Emissions Factor Model, Version 2021 (EMFAC2021), approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024.

4.1.3 Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern with GHGs is that increases in their concentrations are contributing to global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different warming potential, and CO_2 is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO_2 equivalents (CO_2e). For example, SF_6 is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF_6, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG, with 22,800 times the global warming potential as CO_2. Therefore, an emission of one metric ton (MT) of SF_6 could be reported as an emission of 22,800 MT of CO_2e. Large emission sources are reported in million metric tons (MMT) of CO_2e.

Existing California GHG Conditions

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls; but California is still a substantial contributor to the U.S. emissions inventory total. CARB compiles GHG inventories for the state. Based upon the 2022 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2021 GHG emissions period, California emitted an average 381.3 million metric tons of CO_2e ($MMTCO_2e$) per year (California Air Resources Board, 2024).

4.1.4 Land Use and Planning

Land Use Designations

The TLSP area, including the Modified Project site, has a General Plan land use designation of TLSP and a zoning designation of SP 1 – Tustin Legacy as shown in Figure 3-5, *Existing General Plan Land Use* and Figure 3-6*, Existing Zoning*.

The Land Use Plan for TLSP has been further divided into 13 separate Planning Areas (PA) and several sub-planning areas, as shown in Figure 3-7, *Existing TLSP Land Use Plan*. Neighborhood D includes PAs 8, 13, and 14 and Neighborhood G includes PA 15. Each PA has been assigned a land use designation. PAs categorize the use and development regulations found within the TLSP. The Land Use Plan PA land use designations include Mixed-Use Transit, Mixed-Use Urban, Commercial, Commercial/Business, Residential, Park, Tustin Legacy Park Overlay, Transitional/Emergency Housing, Education Village, and Public Street Right-of-Way (ROW).

Neighborhood D North is designated as Mixed-Use Urban with a portion covered by the Tustin Legacy Park Overlay. The TLSP states that the Mixed-Use Urban designation is intended to provide flexibility for a range of uses including hotel, commercial retail, commercial entertainment, public recreation, high school, and residential. PA 15 is designated as Mixed-Use Transit with a portion covered by the Tustin Legacy Park Overlay. According to TLSP, the Mixed-Use Transit designation is intended to provide for transit-oriented, mixed-use developments with residential, office, commercial retail, and commercial service uses in a vertical or horizontal configuration.

Existing Land Uses

The TLSP area contains existing commercial, office, institutional, and residential development, parks, and vacant land. Existing commercial development consists of a regional shopping center (approximately 1,016,000 square feet) called The District, which has over 75 businesses, including specialty and big box retail, restaurants, entertainment, and a variety of services. There is also The Village at Tustin Legacy shopping center, which contains a grocery store, pharmacy, restaurants, commercial services, and health related services, including medical offices and a veterinarian. Flight at Tustin Legacy at the western end of TLSP is a creative office campus that currently has more than 450,000 square feet of leasable space, and an indoor restaurant mall (food hall). Flight at Tustin Legacy is expected to increase its office space to 870,000 square feet. Existing institutional uses include Heritage Elementary School and Legacy Magnet Academy (6-12th grades), which are part of the Tustin Unified School District. Other institutional uses include a regional law enforcement training facility, an Army Reserve Center, the Village of Hope transitional housing/emergency shelter operated by the OC Rescue Mission, the OC Animal Care Shelter, and a children and family care shelter operated by the County of Orange Social Services Agency. A daycare, Goddard School, is currently under construction. In addition to these uses, the South Orange County Community College District has a small campus with approximately 14,680 square feet of educational uses—the first phase of a larger mixed-use educational campus referred to as the Advanced Technology & Education Park (ATEP).

At the time that the 2017 TLSP SPA (Approved Project) was adopted, there existed residential development, consisting of five neighborhoods—Tustin Fields I and II, Columbus Square, Columbus Grove in Tustin, and Columbus Grove in Irvine. These neighborhoods total 2,507 units (402 units in Irvine and 2,105 in Tustin). Additionally, since 2017 a 225-unit affordable housing community (Anton Legacy), a 533-unit apartment complex (Amalfi Apartments), a 375-unit single-family neighborhood (Greenwood in Tustin Legacy), a 218-unit single family and multifamily neighborhood (Levity at Tustin Legacy), and a 400-unit single family and townhome neighborhood (The Landing at Tustin Legacy) which was recently under construction. The neighborhoods include recreation and parkland.

In the City of Irvine, the Irvine Unified School District has a small campus called the Creekside Education Center on approximately 20 acres at the northern corner of Barranca and Harvard. Approximately eight acres have been developed on the site with administration facilities, Creekside High School, and Irvine Adult School. These uses comprise 35,400 square feet of building space. A 15,000-square-foot central kitchen and 4,000-square-foot culinary arts institute were recently approved on a 4-acre portion of the site.

Several developments within the Modified Project site (Neighborhoods D and a portion of Neighborhood G) have been completed since certification of the Approved Project. The first phase of a 40-acre middle school and high school, Legacy Magnet Academy, at the southwest corner of Tustin Ranch Road and Valencia Avenue in Neighborhood D (North) was completed in 2020. The Landing at Tustin Legacy is a 400-unit above-moderate-income development within Neighborhood D South that was entitled in 2021 and nearing final completion. Additionally, the Alley Grove Promenade was recently constructed south of The Landing. The Alley Grove Promenade project is an approximately 2.8-acre open space pedestrian walkway and multimodal connection from Armstrong Avenue to Tustin Ranch Road through Neighborhood D South at Tustin Legacy. CalAtlantic Homes developed Levity at Tustin Legacy, a 218-unit above-moderate-income development within Neighborhood G. This project was entitled in 2018 and has since been completed.

On November 7, 2023, a fire erupted in Navy Hangar 28 (located in TLSP Neighborhood C). The Navy hangar was destroyed, and as of the date of this document, it has been demolished and debris removal will occur soon. Notably, the fire was contained to Navy Hangar 28, such that Navy Hangar 29 was not impacted, and remains unaltered.

Hazardous Waste and Groundwater Remediation Sites

The Tustin Legacy Specific Plan encompasses the former Marine Corps Air Station Tustin, which closed in 1999. Since that time, hazardous waste remediation has been occurring across the site under the authority of the Department of Navy. Specifically, the environmental remediation activities at Tustin Legacy (former Marine Corps Air Station (MCAS) Tustin) are handled by the BRAC (Base Realignment and Closure) Cleanup Team (BCT), comprised of the Department of the Navy, the Santa Ana Regional Water Quality Control Board and the CA Department of Toxic Substance Control (DTSC), and Restoration Advisory Board (RAB) (Orange County Grand Jury, 2020). These cleanup efforts have been heavily documented throughout various plans, agreements, and ongoing testing of the site. The TLSP works in tandem with the plans, policies, and regulations applicable to the hazardous sites within the TLSP, such that once the hazardous conditions of an area within the TLSP area are remediated to acceptable conditions (e.g., per the City's Memorandum of Agreement (MOA) with the Navy and DTSC), the area defaults to the approved land uses within the TLSP.

The following includes a summary of hazardous conditions of the TLSP area and remediation activities currently ongoing.

Ongoing MCAS Cleanup

A Federal Facilities Support Remediation Agreement (FFSRA) between the Navy and the DTSC is currently in place for the former MCAS Tustin, which governs the Navy's corrective action and response obligations

under the Resource Conservation and Recovery Act and CERCLA (City of Tustin, 2023). The Navy is able to transfer property with ongoing environmental remediation once the system treating the environmental issue is Operating Properly and Successfully (OPS) for a three-year period. This means that the Navy can transfer property even with ongoing cleanup activities, as long as the remedy selected for that particular issue is in place and performing.

The difficulty over the last 10+ years with the Navy transferring property has been changing environmental standards which have made OPS unobtainable. For example, in 2017 the State of California established a Maximum Contaminant Level (MCL) for 1,2,3 – trichloropropane (1,2,3-TCP) of .005 mg/l, when the previous MCL was 0.5 mg/l. This significant change in cleanup goals required the Navy to re-mobilize and re-sample several times, to ensure that the existing treatment system was successfully remediating to the new 1,2,3-TCP cleanup goal.

The original Economic Development Conveyance (EDC) between the Navy and City governs how 1,153 acres of the 1,600-acre former MCAS Tustin was to be transferred to the City (the remaining acreage was conveyed directly to other entities and agencies) (City of Tustin, 2023). Of the 1,153 acres transferred to the City, 979 acres were deeded to the City in 2002. The remaining 174 of the 1,153 acres, which are not yet owned by the City, are under a Lease In Furtherance of Conveyance (LIFOC) between the Navy and the City. The LIFOC grants the City a lease the remaining properties while the Navy undertakes additional environmental investigation and/or remediation under per FFSRA per their agreement.

The 174 LIFOC acres have been separated into eleven "carve-out" areas throughout the former Navy base. Contaminants within the carve-out areas represent footprints. Contaminants within the carve outs include trichloroethylene, trichloropropane, jet fuel, petroleum hydrocarbons, volatile organic compounds, metals, and polynuclear aromatic hydrocarbons. Additionally, asbestos-containing materials were identified in 77 former buildings onsite, and nonresidential buildings built before 1980 were assumed to contain lead-based paint. These conditions were identified in the FEIS/EIR, and subsequent CEQA documentation, as resulting in a less than significant impact after remediation of environmental contamination per existing federal and state regulatory compliance.

Since 2002, nine of the eleven carve-outs have met OPS conditions and have been conveyed to the City. These nine carve out areas constitute approximately 60 of the total 174 LIFOC acres remaining under LIFOC. Two of the eleven carveouts, Carve Outs 5 and 6, have not yet met OPS conditions and remain under Navy management. Carve Outs 5 and 6 total approximately 114 acres.

Groundwater contamination is identified as occurring within several plumes that underly Carve Outs 5 and 6. Trichloroethylene, trichloropropane, and other chlorinated hydrocarbons were found in groundwater and soil. Site remediation consists of pumping and treating groundwater, in-situ bioremediation, and monitored natural attenuation. Existing groundwater contamination sources are shown in Figure 5.4-1, *Hazardous Cleanup Sites*, in Section 5.4, *Land Use*, of this Draft SEIR.

PFAS

Per- and polyfluoroalkyl substances (PFAS) are an emerging contaminant nationwide and worldwide. The State of California has been regulating PFAS in drinking water since 2018. The Navy is currently assessing PFAS impacts at Tustin Legacy with DTSC and RWQCB oversight. The recent emergence of PFAS has created a new contaminant that will require extensive research, sampling, and potentially a new treatment strategy. Any conveyances of areas currently impacted by PFAS will likely be delayed until more information on PFAS has been collected, as well as guidance is given from the Environmental Protection Agency (EPA) to the Department of Defense (DOD) and ultimately to the Navy.

Scientific studies have shown that ingestion of PFAS over time may be linked to harmful health effects (City of Tustin, 2024). The most common method of ingestion of PFAS is through contaminated drinking water.

Drinking water at Tustin Legacy is supplied by the Irvine Ranch Water District from non-Tustin Legacy sources. The drinking water delivered to residences and businesses in Tustin does not contain any detectable levels of PFAS (IRWD, 2024).

Hangar Fire

The north hangar (Navy Hangar 28), located near Valencia Avenue and Armstrong Road, is currently owned by the Department of the Navy. The building sustained roof damage in October 2013 during a windstorm and was almost destroyed by a fire in November 2023. The portions of the building left standing have been demolished. The removal of demolition debris is in process.

The former MCAS Navy Hangar 28 incident response has evolved since the fire began on November 7, 2023, and a four-phase response approach has been initiated (Orange County Health Care Agency, 2024). Phase 1 included the fire response phase, which included fire suppression, debris removal, and application of water to asbestos containing materials (ACM) to reduce the number of airborne fibers. The second phase, the phase currently taking place at the time of the drafting of this document, includes debris stabilization, which involves application of soil sealant to debris, and removal of the hangar doors. The third stage is the maintain stabilization phase, which requires reapplication of soil sealant if monitoring exceedances occur. The final phase is remediation, which requires permitted remediation of ACM debris, such as potentially hauling contaminated soils offsite. Since phase one, monitoring has continued (24/7) around the north hangar and surrounding community testing for particulate matter (PM), volatile organic compounds (VOCs), asbestos and metals has been ongoing. ACM testing is performed intermittently. There have been no detections of airborne asbestos during air monitoring/sampling conducted thus far. The hazard of potential asbestos exposure has been significantly reduced now that the fire has been extinguished and a sealant has been applied to the debris that remains at the incident site. A website has been created that is dedicated to communication of the hangar fire and ongoing cleanup activities: https://www.tustinca.org/1457/North-Hangar-Fire-Community-Resource-Page. The latest information regarding the status of the site can be found on the City's website.

4.1.5 Noise

Existing Noise Levels

The primary existing noise sources in the TLSP area are roadways, including Barranca Parkway, Red Hill Avenue, Park Avenue, intermittent train noise, and commercial, office, and residential uses. To assess existing noise levels of the environment, long-term (24-hour) noise level measurements were conducted on February 8 and 9, 2024, at three locations as shown on Figure 5.5-1, *Noise Measurement Locations*, in Section 5.5, *Noise*, of this Draft SEIR. Table 5.5-7, *Summary of 24-Hour Ambient Noise Level Measurements*, in Section 5.5, *Noise*, provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements. As shown, the existing ambient noise levels range from 69.2 dBA CNEL to 73.2 dBA CNEL.

Existing Vibration

Aside from periodic construction work that may occur in the vicinity of the TLSP area, the TLSP area and adjacent land uses are not currently exposed to substantial sources of groundborne vibration.

Existing Airport Noise

John Wayne Airport (SNA) is located approximately 1.5 miles to the southwest of the TLSP area. The TLSP area is located outside of the airport's 60 CNEL noise contour. In addition, the General Aviation Noise

Ordinance restricts airport operations between 11:00 p.m. and 7:00 a.m., to limit the hours of noise generated by SNA.

Sensitive Receivers

Noise sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include residences, schools, hospitals, and recreation areas. Existing offsite sensitive noise receptors where someone can remain for 24 hours in the vicinity of the Project site consists of residences. The Modified Project considers changes to the Approved Project through a proposed SPA. The Approved Project considers buildout of the TLSP as a whole and does not analyze the environmental impact of the project onto itself, but rather impacts on the surrounding area. Existing sensitive air quality receptors outside of the TLSP area where someone can remain for 24-hours in the vicinity of the Project site consists of residences. The closest existing sensitive receptors are residences, The Bowery, located approximately 140 feet west of the TLSP boundary (see *Figure 5-1, Cumulative Projects*, in Section *5, Environmental Impact Analysis*, of this Draft SEIR). However, in consideration that buildout of the TLSP has and will continue to occur over multiple phases, future sensitive receptors within 50 feet of the Modified Project site have been conservatively considered for this analysis (to account of existing and future onsite and offsite receptors).

4.1.6 Population and Housing

Population

According to the California Department of Finance (DOF), the City of Tustin had a population of 79,558 in 2023 (California Department of Finance, 2023). The Southern California Association of Governments (SCAG) estimates that the City of Tustin had a population of 80,400 persons in 2019 and estimates that the City's population will increase to 93,317 in 2050 which is a 16.1 percent increase.[1] In comparison, the SCAG projects the County of Orange will have a 7.8 percent increase in population between 2019 and 2050, as shown on Table 5.6-2, *City and County Existing and Projected Population, 2019-2050*, in Section *5.6, Population and Housing*, of this Draft SEIR.

Housing

The California DOF estimates that the City of Tustin contained 28,405 housing units in 2023. The housing types in the City of Tustin compared to those in the entire County are provided in Table 5.6-3, *City and County Housing Estimates by Type 2023*. As shown, the County has a higher percentage of detached single-family housing units and a lower percentage of single-family attached and multi-family housing units than the City. In addition, the California DOF details that the City had an average household size of 2.88 persons per household. In comparison, the County had an average household size of 2.83 persons per household.

Employment

The City of Tustin is estimated to contain 51,700 employment opportunities as of 2019. The SCAG regional growth projections anticipate the number of jobs in the City of Tustin to increase by 37.9 percent to 71,300 jobs in the year 2050. In comparison, the County is projected to see a 11.9 percent increase in the number of jobs by 2050, as shown in Table 5.6-5, *City and County Existing and Projected Employment, 2019-2050*.

[1] The 2050 population estimate was derived using the methodology presented in Section 4.5 of the SCAG Demographics & Growth Forecast which states an estimate of the future City-level population based on Connect SoCal's household forecast can be derived using a county-level Population:Housing ratio from TABLE 12 and applying it to the City's future household growth (Southern California Association of Governments, 2024).

The SCAG 2019 Local Profile for Tustin identifies that 7.3 percent of Tustin residents work and live in the City, while 92.7 percent commute to other places (Southern California Association of Governments, 2019). Of the commuters residing in Tustin, the largest percentage commute to the City of Irvine (18.6 percent), Santa Ana (10.4 percent), Anaheim (5.5 percent), and Orange (5.2 percent).

Jobs-Housing Ratio

The jobs-housing ratio is a general measure of the total number of jobs and housing units in a defined geographic area, without regard to economic constraints or individual preferences. SCAG applies the jobs-housing ratio at the regional and subregional levels to analyze the fit between jobs, housing, and infrastructure. A major focus of SCAG's regional planning efforts has been to improve this balance. SCAG defines the jobs-housing balance as follows:

> Jobs and housing are in balance when an area has enough employment opportunities for most of the people who live there and enough housing opportunities for most of the people who work there. The region as a whole is, by definition, balanced…. Job-rich subregions have ratios greater than the regional average; housing-rich subregions have ratios lower than the regional average. Ideally, job-housing balance would… assure not only a numerical match of jobs and housing but also an economic match in type of jobs and housing.

There is no ideal ratio adopted in state, regional, or city policies. However, the American Planning Association recommends a target ratio of 1.5 jobs per housing unit; communities with more than 1.5 jobs per dwelling unit are considered jobs-rich; those with fewer than 1.5 are "housing rich," meaning that more housing is provided than employment opportunities in the area (Weitz, 2003). A job-housing imbalance can indicate potential air quality and traffic problems associated with commuting. Table 5.6-6, *Jobs – Housing Trends in the City of Tustin*, provides the projected jobs-to-housing ratios for the City, based on SCAG's 2024-2050 RTP/SCS.

The projected 2050 jobs-to-housing ratios for the City of Tustin and Orange County are 2.1 and 1.61, respectively. This indicates that both the City of Tustin and Orange County are jobs-rich. Therefore, it is possible that people employed in the City of Tustin are commuting from elsewhere.

4.1.7 Public Services

Fire Protection Services

Fire protection and emergency medical services in the City of Tustin are provided by the Orange County Fire Authority (OCFA) through a contract for services. The OCFA provides fire suppression, emergency medical, rescue, fire prevention, hazardous materials coordination, and wildland management services. OCFA serves 23 cities in Orange County and all unincorporated areas. Within the City of Tustin, OCFA provides services from three fire stations.

The Project site's primary responsibility area is split between Station 37 and Station 6 (T. Rivers, personal communication, April 8, 2024). Station 37 is located within the TLSP area, southwest of the intersection of Edinger Avenue and Kensington Park Drive. Station 6 is located adjacent to the southern portion of the TLSP along Barranca Parkway in Irvine. The location, equipment, and staffing of Station 37 and Station 6 are provided in Table 5.7-1, *Location, Staffing, and Equipment for Station 37 and Station 6*, in Section 5.7, *Public Services*, of this Draft SEIR.

As provided by the OCFA 2022 Statistical Annual Report, in 2022 there were 6,449 incident totals from the three fire stations located within the City boundary (Orange County Fire Authority, 2022). Of the calls for service, 76.8 percent (4,953) were for emergency medical calls, 1.4 percent (93) were for fire

incidents, and 28.3 percent (1,403) were for other incidents, which includes: canceled service calls, ruptures, hazardous conditions, false alarms, and miscellaneous calls.

The OCFA standard for first-due response is 8:30 minutes at the 90th percentile. First-due refers to the fire department that is responsible for responding to an emergency call in a specific area. The standard response time for the effective response force (initial response of three engines, one ladder truck and one Battalion Chief) is 11:30 minutes at the 90th percentile. Table *5.7-2, OCFA Station 37, 21, and 43 Calls for Service and Response Data – 2023*, provides a summary of service and response metrics for the responding stations to the Project site (Station 37 and Station 6) in 2023. As shown, in 2023 the 90th percentile response time for Station 37 was 8:51 minutes and 8:51 minutes for Station 6.

Police Services

The Tustin Police Department provides police services throughout the City. Police Department headquarters are located at 300 Centennial Way, Tustin, CA 92780, which is approximately 1.8 miles northwest of the Project site.

As of May 2024, the Tustin Police Department has 83 full time Sworn Police Officers, 7 part time Sworn Officers, 44 full time civilian support personnel and 12 part time civilian support personnel. According to the California Department of Finance, the City of Tustin had a population of 78,559 residents in 2023 (California Department of Finance, 2023). Based on this population estimate, the City's sworn officer to population ratio is 1.1 officers per 1,000 population.

Tustin Police Department groups calls for service into four priority categories, described below.

- Priority 1: Immediate threat to life or significant threat to public safety. Priority 1 calls are dispatched immediately.
- Priority 2: Crimes in progress or other calls for service with a potential threat to public safety that do not rise to the level of a Priority 1 call. These calls are dispatched as soon as possible.
- Priority 3: Calls for service with a reporting party who is waiting for an officer.
- Priority 4: Report calls with a delay in reporting and limited suspect information.

Average response times for each call type between January 1, 2023, to December 31, 2023, City wide are provided below.

- Priority 1 – 00:05:43
- Priority 2 – 00:14:25
- Priority 3 – 00:42:27
- Priority 4 – 00:53:36

School Services

The TLSP is within the service areas of the Tustin Unified School District (TUSD), Irvine Unified School District (IUSD), and Santa Ana Unified School District (SAUSD), as shown in Figure *5.7-1, School District Boundaries*, in Section *5.7, Public Services*. TUSD serves the majority of the TLSP area, including Planning Areas 1, 2, 4-5, 6, 7, 8, 15, 16-19, and a portion of 13-14. IUSD serves a portion of Planning Area 15 and development east of Jamboree Road (Planning Areas 20, 21, and 22). SAUSD serves Planning Area 9-12 and a portion of Planning Area 13-14.

Tustin Unified School District

Tustin Unified School District (TUSD) serves a 24-square mile area and has a total of 30 schools including: 16 elementary schools, two (2) K-8 schools, one (1) K-12 school, four (4) middle schools, one (1) 6-12 school, four (4) high schools and one (1) adult education school.

According to the data from California Department of Education, TUSD has an enrollment of 21,830 students in the 2022/2023 school year (California Department of Education, 2024). Within the TUSD, the Modified Project site is in the attendance areas of the following schools.

- Heritage Elementary School (K-5) is located at 15400 Lansdowne Road within TLSP Neighborhood A.
- W.R. Nelson Elementary School (K-5) is located at 14392 Browning Avenue, approximately 0.6 miles northeast of the TLSP.
- Sycamore Magnet Academy Middle School (6-8) is located at 1402 Sycamore Avenue, approximately 0.3 miles north of the TLSP.
- Legacy Magnet Academy (6-12) is located at 15500 Legacy Road, which is within TLSP Neighborhood D.
- Tustin High School (9-12) is located at 1171 El Camino Real, approximately 1.2 miles north of the TLSP.

Table 5.7-3, *Existing School Capacity of TUSD Schools Serving the Project Site*, shows the total capacity, the 2023-2024 school year enrollments, and the remaining capacity of the schools that would serve TUSD students residing in the Modified Project site. As shown, W.R. Nelson Elementary, Sycamore Magnet Academy and Tustin High School have remaining capacity to serve between 50 and 265 additional students. Heritage Elementary School and Legacy Magnet Academy do not have any remaining capacity as of 2023-2024 data.

Irvine Unified School District

Irvine Unified School District (IRWD) serves a 53-sqaure mile area and more than 38,000 students in one (1) early childhood learning center, 24 elementary schools, five (5) K-8 schools, six (6) middle schools, five (5) high schools and one (1) alternative high school and two (2) virtual academies (Irvine Unified School District, 2024).

The portion of the TLSP that falls within the IUSD is fully built out and no further development within the boundary is anticipated. Therefore, no additional IUSD students would be generated by the Modified Project.

Santa Ana Unified School District

Santa Ana Unified School District (SAUSD) serves a 24-square mile area and has a total of 57 schools, including: 26 elementary schools, two K-6 schools, four K-8 schools, eight intermediate schools, seven high schools, four educational options secondary schools, one independent charter, one child development center, three early childhood education programs, and one K-6 deaf and hard of hearing regional program (Santa Ana Unified School District, 2024).

According to the data from California Department of Education, SAUSD has an enrollment of 42,247 students in the 2022/2023 school year (California Department of Education, 2024). Within the SAUSD, the Modified Project site is in the attendance areas of the following schools.

- Monroe Elementary School (K-5), located at 417 Ease Central Avenue, Santa Ana, approximately 1.3 miles west of the TLSP.
- McFadden Institute of Technology (6-8), located at 2701 South Raitt Street, Santa Ana, approximately 3 miles west of the TLSP.

- Century High School (9-12), located at 1401 South Grand Avenue, Santa Ana, approximately 1.4 miles northwest of the TLSP.

Table 5.7-4, *Existing School Capacity of SAUD Schools Serving the Project Site*, shows the total capacity, the 2023-2024 school year enrollments, and the remaining capacity of the SAUSD schools that would serve students residing in the Modified Project site. As shown, all three schools have a remaining capacity to serve between 264 and 1,180 additional students.

Library Services

The Orange County Public Library (OCPL) provides library services to the City, including the Project site. OCPL has 33 branch libraries in 24 incorporated cities and unincorporated areas of Orange County and has a system-wide collection of approximately 2.5 million items (Orange County Public Libraries, 2020). The City of Tustin has one branch library operated by OCPL: the Tustin Library, located at 345 East Main Street, approximately 1.6 miles northwest of the Project site. Additionally, the Heritage Park Library, operated by OCPL, is located at 14361 Yale Avenue in Irvine, is approximately 1.3 miles northeast of the Project site; and Heritage Park Regional Branch, operated by OCPL, is located at 14361 Yale Avenue in Irvine, approximately 1.6 miles east of the Project Site.

The Tustin Library branch has amenities such as public computers with internet access, a Memory Lab for library users to digitize their own documents, a local history collection featuring books specific to the Tustin community and surrounding area and OC Read. OC Read is a program designed to support adult learners to further their work, family, and personal goals.

OCPL has a service standard of 0.2 SF of library facility per capita for the purpose of projecting the need for additional library services (Orange County, 2020).

4.1.8 Transportation

Existing Site Access

The public roadway network serving the Project site includes the following roadways described below and listed in Table 5.8-1, *Existing Roadway Characteristics within Project Area*, in Section 5.8, *Transportation*, of this Draft SEIR.

Red Hill Avenue – Major Arterial

Red Hill Avenue, bordering the TLSP area to the west, is a regional-serving seven-lane major arterial highway that functions as a high-capacity connection between employment centers, residential areas, and the I-5 freeway. The cities of Tustin and Santa Ana share the right-of-way.

Edinger Avenue – Major Arterial

Edinger Avenue, bordering the TLSP area to the north, is a regional-serving six-lane major arterial highway that extends from Seal Beach in Los Angeles County to Dana Point in south Orange County (with multiple name changes along the way). Within the vicinity of TLSP area, it functions as a high-capacity connection between employment centers, residential, and commercial areas, the SR-55 freeway, and SR-261 Toll Road. It is flanked to the north by Southern Pacific Railroad and Tustin Metrolink Station. This segment is designated as a six-lane Smart Street by the OCTA.

Tustin Ranch Road (Von Karmen Avenue) – Major Arterial

Tustin Ranch Road is a 6-lane major arterial highway that bisects TLSP area, bridges over Edinger Avenue and the Southern Pacific Railroad tracks, and connects to I-5 on the north. It serves employment centers, residential neighborhoods, and commercial areas extending from Newport Beach through Tustin.

Warner Avenue – Major Arterial

The segment of Warner Avenue in the TLSP area completes the continuation of this major six-lane east-west arterial highway. Warner Avenue was designed to go around the southern blimp hangar, which results in an off-set intersection at Tustin Ranch Road. Warner Avenue extends through the heart of the TLSP area, and serves residential, employment, institutional, and commercial/entertainment uses.

Valencia Avenue – Secondary Arterial/ Local Collector

Valencia Avenue is a major entryway into the TLSP area, providing access to neighborhoods, shopping, recreation, and a range of education and other institutional uses. There are four slightly different right-of-way configurations, based on the traffic demands of adjacent uses and the overall urban character along different segments. The segment east of Edinger Connector has been designated as a local collector based on anticipated traffic demands.

Victory Road – Secondary Arterial

Victory Road is a secondary arterial in Planning Area (PA) 1 and PA 15. In PA 1, Victory Road provides secondary access into TLSP area from Red Hill Avenue. It is intended to primarily serve the Advanced Technology and Education Park (ATEP) campus, which flanks Victory Road on both sides. In PA 15, Victory Road is a residential street that connects to Tustin Ranch Road and provides access to the residential projects within the Mixed-Use Transit neighborhood.

Armstrong Avenue – Secondary Arterial

Armstrong Avenue is an important arterial that will serve the employment hub of the TLSP area, as well as provide access to other major public institutional uses within the site.

Moffett Drive – Secondary Arterial/Local Collector

Moffett Drive, east of Jamboree Road, is fully improved. From Tustin Ranch Road to Park Avenue, Moffett Drive is intended to function as a secondary arterial, with four travel lanes. Between Park Avenue and Jamboree Road, Moffett Drive is narrowed to two travel lanes and becomes a modified local collector.

Park Avenue – Secondary Arterial/Modified Local Collector

Park Avenue north of Warner Avenue is planned in several different configurations ranging from a secondary arterial to a modified local collector serving the Mixed-Use Transit neighborhoods. South of Warner Avenue, Park Avenue serves the regional shopping center called The District.

Legacy Road – Secondary Arterial

Legacy Road is an existing four-lane arterial within the Mixed-Use Urban neighborhood that serves residential uses.

Kensington Park Drive – Secondary Arterial

Kensington Park Drive is one of two access roads into TLSP area from Edinger Avenue. The intersection is fully signalized. The road is adjacent to Columbus Square on the west and The Village at Tustin Legacy shopping center on the east.

Existing Transit Service

Public transit bus service for the City is provided by the Orange County Transportation Authority (OCTA). Two Metrolink commuter rail routes serve the Tustin station: the Orange County Line operates between Oceanside in San Diego County and Los Angeles, and the Inland Empire-Orange County Line operates between San Bernardino and Oceanside. A total of 45 trains per day stop at the station (29 Orange County Line and 16 Inland Empire-Orange County Line) (Metrolink 2014). A Metrolink transit plaza is located across from the project area on the corner of Edinger Avenue and Jamboree Road. The proposed Specific Plan Amendment requires Planning Area 15, across from the transit station, to be transit oriented in terms of scale, form, design, and mix of uses. A pedestrian bridge across Edinger Avenue would be the primary pedestrian and bicycle connection between the project area and the transit station. Vehicular access would be provided by additional street access along Edinger Avenue.

Existing Bicycle and Pedestrian Facilities

The Recreational Bikeway/Trail Concept Plan provides an opportunity to complete vital links necessary for a comprehensive regional system as well as improved local system. There are three planning agencies involved in the implementation and maintenance of the bikeway/trail system for the Plan and adjacent areas: the City of Tustin, Orange County Public Works, and the City of Irvine. Each of these agencies has developed their own recreational bikeway and trail master plan to efficiently move cyclists within the respective communities served. Ongoing interagency coordination will be required to address the issues associated with bikeway and trail implementation.

The TLSP Recreational Bikeway/Trail Concept Plan links to adjacent on- and off-road bikeways/trails as identified in Figure 5.8-2, *TLSP Bikeways and Trails Plan*, in Section 5.8, *Transportation*, of this Draft EIR. These facilities are part of a local and regional network planned by the City of Tustin, County of Orange, and City of Irvine.

Existing Vehicle Miles Traveled

As identified in Section 3, *Project Description*, land uses that were modeled for the Approved Project (2017 TLSP) include 4,486 multi-family housing units, 165,600 SF of hotel, 95,200 SF neighborhood commercial, 1,568,090 SF community commercial, 420,000 SF office, 1,000,000 SF continuing care – senior housing, 1,784 high school students (attendance is used for modeling purposes in lieu of school size), and 91 acres of passive park space and 45 acres of active park space.

The 2017 SEIR determined the Approved Project would result in 239,797 daily trips. Using trip generation rates provided by the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition, 2021*, the Approved Project trip generation was calculated to be 100,661 daily trips, with a concentration of trips occurring during the PM peak time (see Appendix D).

VMT was not previously analyzed for the Approved Project. However, the 2016 Base Year home-based VMT per capita for the for the three TAZ zones are 8.3 for TAZ 1133, 14.0 for TAZ 1134, and 8.2 for TAZ 1136. The citywide Base Year 2016 home-based VMT is 15.0 VMT per capita (Appendix D). Existing VMT per capita rates across the Modified Project site is generally below the citywide VMT per capita (according to 2016 Base Year).

4.1.9 Tribal Cultural Resources

Tribal Cultural Resources

A records search from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton was completed and encompassed the Project site and a 500-foot buffer surrounding the Project (BFSA Environmental Services, 2023). The results of the records search identified five archaeological resources that were previously recorded within the Project area. The five resources consist of three prehistoric resources, one historic resource, and one multicomponent resource.

The prehistoric resources include two isolate artifacts that include a stone bowl fragment and a granitic pestle. In addition, one prehistoric limited habitation site was also previously recorded within the Project area. These resources have been previously evaluated as not eligible to the California Register of Historic Resources (CRHR) based on previous studies by Demcak (2006, as cited in BFSA Environmental Services, 2023). The historic resources previously identified included two (2) former United States Marine Corp World War II era blimp hangars which have been previously evaluated as both CRHR eligible resources and National Register of Historic Places (NRHP) eligible resources. However, in November 2023 the northern blimp hangars was lost due to an accidental fire (the southern hangar was unaffected by the fire and remains extant). The southern hangar is in TLSP Neighborhood D. The multicomponent site is primarily historic in composition consisting of historic glass bottles of varying types, ceramics, flatware, and one prehistoric mano discovered during cultural resource monitoring for the Tustin Phase I Legacy Project (Kay, 2017, as cited in BFSA Environmental Services, 2023). The multicomponent site was not identified as eligible for listing to the CRHR.

In addition to the five resources identified inside the Project area, four resources were identified within the 500-foot search radius buffer. The resources include a prehistoric food preparation site, two prehistoric isolates, and historic military structures.

Sacred Lands File Search

The City requested a Sacred Lands File (SLF) search from the NAHC and received the results on October 19, 2023. The SLF returned negative results, indicating that no known tribal resources are located within the Project area.

4.1.10 Utilities and Service Systems

Water Supply and Demand

Water is supplied to TLSP by the Irvine Ranch Water District (IRWD). IRWD provides water services to a 181-square mile service area that includes all of the City of Irvine and portions of the surrounding cities of Tustin, Santa Ana, Orange, Costa Mesa, Lake Forest, Newport Beach, and unincorporated areas of Orange County.

IRWD's water supply is a combination of groundwater, imported water, and recycled water. Approximately 50 percent of IRWD's water supplies comes from local groundwater wells in the Orange County Groundwater Basin (OC Basin), and the Irvine and Lake Forst sub-basins. Imported water from the Metropolitan Water District of Southern California (MWD) makes up less than one-fifth of IRWD's supply. Water imported to Orange County comes from two sources; the Sacramento-San Joaquin Delta in Northern California through the State Water Project (SWP), and from the Colorado River through the Colorado River Aqueduct. IRWD meets about a quarter of the service area's water demands with recycled water.

Table 5.10-2, *IRWD Projected Water Supply*, in Section 5.10, *Utilities*, of this Draft SEIR, provides IRWD's total projected supply capacities expected to be available to IRWD through 2040. These future planned water supplies are based on historical groundwater production, planned future supply projects, as well as information from Metropolitan and Municipal Water District of Orange County's (MWDOC) 2020 UWMPs. There is a total projected water supply of 178,727 acre-feet per year available for the years 2025 through 2040.

The 2020 UWMP also describes that water demands per capita have been decreasing in recent years due to new state and local regulations related to water conservation. The 2020 UWMP describes that IRWD used 95 gallons per capita per day (GPCD) in 2020, which is below the target of 171 GPCD for 2020 (Irvine Ranch Water District, 2021). Table 5.10-2, *IRWD Projected Water Supply*, summarizes IRWD's projected overall water supplies with project buildout as determined by IRWD (Appendix E). As shown in Table 5.10-3, *IRWD Supply and Demand with Project Buildout During Normal, Dry, and Multiple Dry Year Scenarios (AF)*, IRWD has supply capabilities that would be sufficient to meet demands from 2025 to 2040 under the normal, single dry-year, and multiple dry years without the project and with project buildout. Thus, IRWD would continue to be able to utilize imported water supply as needed.

Water Infrastructure

The TLSP area potable water distribution system is owned and operated by IRWD. The IRWD SAMP for the TLSP area was updated by Michael Baker International on March 16, 2017. The updated SAMP includes updates to the potable water, wastewater collection and non-potable water distribution, and sewer infrastructure analysis to reflect land uses and buildout assumptions included within the Approved Project (2017 TLSP). Existing water infrastructure is shown in Figure 5.10-1, *Potable Water System*, in Section 5.10, *Utilities*, of this Draft SEIR.

The ultimate backbone potable water distribution system proposed for the TLSP service area is based on a computer hydraulic model simulation. Most of the on-site backbone system has been constructed to date. The ultimate distribution system proposes to add service pipelines within Planning Areas 8, 9-12, 13-14, and 15A, which will also provide additional looping that will enhance system reliability and maximize capacity of the potable water system (Michael Baker, 2017). Further development of the distribution system is unknown at this time and will be constructed in accordance with the *Tustin Legacy Specific Plan Phasing Program*. Figure 5.10-1, *Potable Water System*, illustrates the proposed ultimate system for serving the TLSP area.

Wastewater

Distribution

The Irvine Ranch Water District (IRWD) collects and conveys wastewater from the TLSP area through its regional collection systems in Harvard Avenue (which runs north-south and abuts the eastern boundary of the Specific Plan area) and Armstrong Avenue (which runs north-south within the western portion of the Specific Plan area). The TLSP area west of Peter's Canyon Channel, Planning Areas 1 through 19 (see Figure 3-7, *Existing TLSP Land Use Plan*), including all of the City's Disposition Areas, generally flow west to the 20-inch Tustin Ranch Road trunk sewer system or to the 27-inch trunk sewer system in Armstrong Avenue. The vast majority of the flows of the Specific Plan area are served by the Armstrong Avenue trunk sewer system. From the confluence of these two onsite trunk systems at Armstrong Avenue and Barranca Parkway, project area tributary flows are conveyed southwesterly through the Armstrong Avenue, MacArthur Boulevard, and Main Street trunk sewer systems to OCSD's treatment facility—Reclamation Plant No. 1. The Armstrong Avenue trunk sewer system is proposed to serve Planning Areas 1, 2, 3, and 9 through 12, as well as portions

of Planning Areas 4, 5, 8, 13, and 14. The sewer drainage basins are shown in Figure 5.10-2, *Sewer Drainage Basins*.

IRWD collects and treats nearly all the sewage generated within the IRWD service area. Sewage collected through IRWD's system is sent to one of the two IRWD water recycling plants, the Michelson Water Recycling Plant (MWRP) or the Los Alisos Water Recycling Plant (LAWRP). The majority of the sewage generated in IRWD's service area is treated to disinfected, tertiary recycled water standards. It is used within the service area for non-potable purposes thus offsetting potable water demands.

Wastewater Treatment

According to IRWD, current sewage flows from the Tustin Legacy Specific Plan are conveyed to Orange County Sanitation District (OCSD) (Lindsay, 2024). The Orange County Sanitation District (OC San) is a public agency that provides wastewater collection, treatment, and disposal services for approximately 2.6 million people in central and northwest Orange County. Reclamation Plant No. 1, the wastewater treatment plant that services the TLSP area, is in the City of Fountain Valley and has a capacity of 204 mgd for advanced primary and secondary treatment. In 2021-2022, the reported average daily flow of wastewater received was a total of 179 million gallons per day (MGD) (Orange County Sanitation District, 2024).

Site Drainage

Planning Area 20 was designated as a 100-year flood zone by the Federal Emergency Management Agency (FEMA). Peters Canyon Channel was also identified as a 100-year flood zone. The remainder of the TLSP area was determined to be outside of 100-year flood zones. TLSP development would require storm drainage improvements to reduce flood hazards in Planning Area 20. Impacts were identified as less than significant in the certified FEIS/EIR.

Implementation measures included in the 2004 Supplemental EIR required drainage studies and that projects make fair-share contributions to the Orange County Flood Control District for construction of flood control facilities required by the affected projects. No substantial change from previous analysis was identified in the 2006 Addendum.

In 2004, a Master Runoff Management Plan for Tustin Legacy (RBF Consulting) was approved by the City of Tustin. The Master Plan covered the ultimate buildout of the Tustin Legacy property, including all 22 Planning Areas and their ultimate land uses—e.g., residential, mixed use, commercial, and park space. A master backbone storm drain system was designed and sized to accommodate the ultimate buildout peak flow for each Planning Area and land use. The design of the master storm drain system also includes significant detention systems to control and manage downstream peak flows. Since the approval of the Master Plan, much of the backbone storm drain infrastructure and detention systems have been constructed.

Solid Waste

Solid waste services would be provided by the Orange County Waste and Recycling and CR&R Waste Services. In addition, the two closest landfills to the Project site are the Frank R. Bowerman Landfill in Irvine and the Olinda Alpha Sanitary Landfill in Brea. The Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and is permitted to operate through 2053. In January 2024, the maximum tonnage received was 8,710.78 tons. Thus, the facility had additional capacity of 2,789.22 tons per day (CalRecycle, 2024). Per a Solid Waste Facility Permit (SWFP) issued on July 8, 2021, the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. The Olinda Alpha Sanitary Landfill is permitted to operate through 2036. In January 2024, the maximum tonnage received was 8,404 tons, which

is below the 10,000 tons per day that the facility is allowed to receive for 36 days of the year (CalRecycle, 2024).

Electrical, Natural Gas, and Telecommunications Facilities

Electricity

Electricity is provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons within its 50,000 square mile service area. According to SCE's 2022 Power Content Label Mix, SCE derives electricity from varied energy resources including: biomass and biowaste, geothermal, hydroelectric, solar, wind, nuclear, and natural gas. SCE also purchases power from independent power producers and utilities, which includes out-of-state providers (California Energy Commission, 2022).

Natural Gas

Natural gas would be provided to the Project by the Southern California Gas Company (SoCal Gas). SoCalGas provides natural gas to more than 21 million persons within its 24,000 square mile service area (SoCalGas, 2024).

Telecommunications

Telecommunications would be provided to the Project by AT&T and Cox Communications.

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5. Environmental Impact Analysis

This chapter examines the environmental setting of the Modified Project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter is divided into subsections for each environmental issue area that was determined to need further study in the Draft SEIR through the NOP review and comment process (see Appendix A). Environmental topic areas discussed in this Draft SEIR include the following:

5.1 Air Quality
5.2 Energy
5.3 Greenhouse Gas Emissions
5.4 Land Use and Planning
5.5 Noise
5.6 Population and Housing
5.7 Public Services
5.8 Transportation
5.9 Tribal Cultural Resources
5.10 Utilities and Service Systems (including criteria from Hydrology and Water Quality)

This Draft SEIR evaluates the direct and indirect impacts resulting from the planning, as well as the assumed future construction and operations of Modified Project buildout. Under CEQA, EIRs are intended to focus their discussion on significant impacts and may limit discussion of other impacts to a brief explanation of why the impacts are not significant.

The Initial Study for the Modified Project (Appendix A) determined that some specific issues under each of the environmental topics would not result in any new impacts or increase the severity of impacts due to implementation of the Modified Project as compared to the Adopted Specific Plan as analyzed by the 2017 SEIR. These findings are documented in Appendix A and summarized in Chapter 7 of this DSEIR. Pursuant to Public Resources Code § 21166 and CEQA Guidelines § 15162, these issues are not discussed further in Chapter *5, Environmental Analysis*, of this SEIR.

FORMAT OF ENVIRONMENTAL TOPIC SECTIONS

Each environmental topic section generally includes the following main subsections:

- **Introduction.** This describes the purpose of analysis for the environmental topic and referenced documents used to complete the analysis. This subsection may define terms used.
- **Regulatory Setting.** This subsection describes applicable federal, state, and local plans, policies, and regulations that the Modified Project must address and may affect its implementation.
- **Environmental Setting.** This subsection describes the existing physical environmental conditions (environmental baseline) related to the environmental topic being analyzed.
- **Thresholds of Significance.** This subsection sets forth the thresholds of significance (significance criteria) used to determine whether impacts are "significant." The thresholds of significance used to assess the significant of impacts are based on those provided in Appendix G of the CEQA Guidelines.
- **Methodology.** This subsection provides a description of the methods used to analyze the impact and determine whether it would be significant or less than significant.
- **Environmental Impacts.** This subsection provides an analysis of the impact statements for each identified significance threshold. The analysis of each impact statement is organized as follows:
    - A statement of the CEQA threshold being analyzed.
    - The Draft SEIR's conclusion as to the significance of the impact.
    - An impact assessment that evaluates the changes to the physical environment that would result from the Modified Project.

  - An identification of significance comparing identified impacts of the Modified Project to the significance threshold with implementation of existing regulations, prior to implementation of any required mitigation.

- **Cumulative Impacts.** This subsection describes the potential cumulative impacts that would occur from the Modified Project's environmental effects in combination with other cumulative projects. This analysis considers Modified Project impacts in combination with SPECIFIC past, present, and probable future projects and/or through consistency with projections contained in applicable planning documents (see Table 5-1, *Cumulative Projects List*).
- **Existing Regulations and Regulatory Requirements.** A list of applicable laws and regulations that would reduce potentially significant impacts.
- **Level of Significance Before Mitigation.** A determination of the significance of the impacts after the application of applicable existing regulations and regulatory requirements.
- **Mitigation Measures.** For each impact determined to be potentially significant after the application of applicable laws and regulations, feasible mitigation measure(s) to be implemented are provided. Mitigation measures include enforceable actions to:

  - Avoid a significant impact;
  - Minimize the severity of a significant impact;
  - Rectify an impact by repairing, rehabilitating, or restoring the effected physical environment;
  - Reduce or eliminate the impact over time through preservation and/or maintenance operations during the life of the Modified Project; and/or
  - Compensating for the impact by replacing or providing substitute resources or environmental conditions.

- **Level of Significance After Mitigation.** This section provides the determination of the impact's level of significance after the application of regulations, regulatory requirements, and mitigation measures.

CUMULATIVE IMPACTS

Cumulative impacts refer to the combined effect of the proposed Modified Project's impacts with the impacts of other past, present, and reasonably foreseeable probable future projects. Both CEQA and the CEQA Guidelines require that cumulative impacts be analyzed in an EIR. As set forth in the CEQA Guidelines Section 15130(b), "the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone." The CEQA Guidelines direct that the discussion should be guided by practicality and reasonableness and focus on the cumulative impacts that would result from the combination of the proposed Modified Project and other projects, rather than the attributes of other projects which do not contribute to cumulative impacts.

According to Section 15355 of the CEQA Guidelines, 'cumulative impacts' refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

a) The individual effects may be changes resulting from a single project or a number of separate projects.
b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant project taking place over a period of time.

Therefore, the cumulative discussion in this Draft SEIR focuses on whether the impacts of the proposed Modified Project are cumulatively considerable within the context of impacts caused by other past, present, and reasonably foreseeable future projects. Additionally, pursuant to the CEQA Guidelines Section 15130(a)(1), an EIR should not discuss cumulative impacts that do not result at least in part from the Modified Project being evaluated in the SEIR. Thus, cumulative impact analysis is not provided for any environmental issue where the proposed Modified Project would have no environmental impact. Analysis of cumulative impacts is, however, provided for all Modified Project impacts that are evaluated within this Draft SEIR.

CEQA Guidelines Section 15130(b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of the following, or a reasonable combination of the two:

- A list of past, present, and probable future projects producing related or cumulative impacts, including those projects outside the control of the lead agency; or
- A summary of projections contained in an adopted local, regional, or statewide plan or related planning document that describes or evaluates conditions contributing to the cumulative effect.

The cumulative analysis for air quality, greenhouse gas emissions, and transportation relies on projections contained in adopted local, regional, or statewide plans or related planning documents, such as Southern California Regional Transportation Plan, Southern California Association of Governments (SCAG) growth projections, and the San Bernardino County Transportation Analysis Model (SBTAM). The cumulative analyses for other environmental issues use the list of projects approach.

Different types of cumulative impacts occur over different geographic areas. For example, the geographic scope of the cumulative air quality analysis, where cumulative impacts occur over a large area, is different from the geographic scope considered for cumulative analysis of aesthetic resources, for which cumulative impacts are limited to Modified Project area viewsheds. Thus, in assessing aesthetic resources impacts, only development within and immediately adjacent to the Modified Project area would contribute to a cumulative visual effect is analyzed, whereas cumulative transportation impacts are based upon annual growth projections and the other proposed and/or foreseeable development within the traffic study area of roadways and intersections. Because the geographic scope and other parameters of each cumulative analysis discussion can vary, the cumulative geographic scope, and the cumulative projects included in the geographic scope (when the list of projects approach is used), are described for each environmental topic.

Table 5-1 provides a comprehensive list of projects considered in this cumulative environmental analysis, which was compiled per information provided by each agency. Due to the proximity to neighboring jurisdictions, the Modified Project considers past, present, and foreseeable future projects within portions of the City of Irvine and the City of Santa Ana in addition to the City of Tustin. Figure 5-1 shows the locations of the various projects.

Table 5-1: Cumulative Projects List

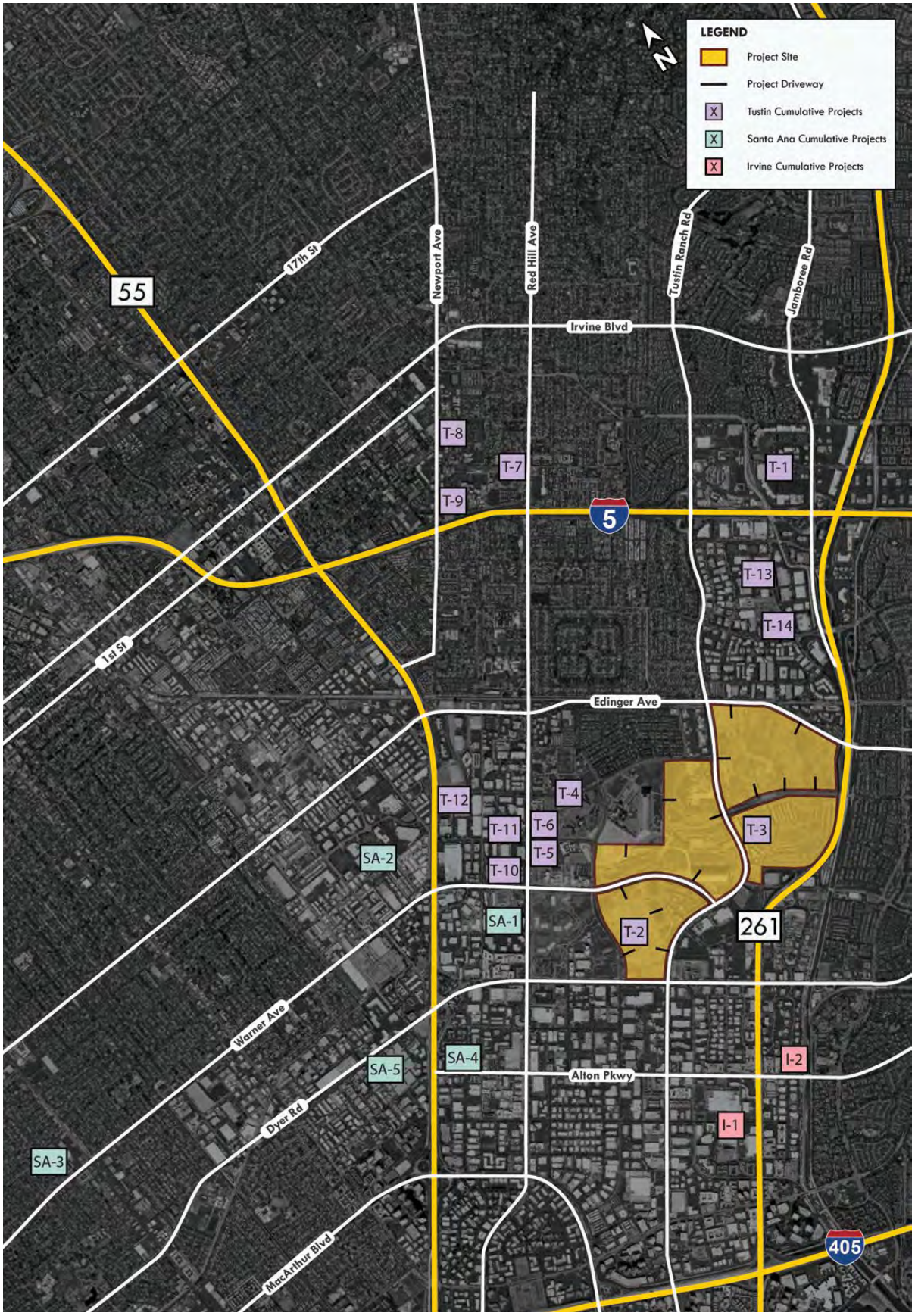
No.	Project	Address	Land Use	Size[2]
City of Santa Ana				
SA-1	Warner/Redhill (The Bowery) [1]	2300 Redhill Ave. Santa Ana, CA	Mixed Use (MFR & Commercial)	MFR: 1,100 DU Commercial: 80,000 SF
SA-2	PacifiCenter New Building [1]	1700 St. Andrew Place Santa Ana, CA	Industrial	161,500 SF
SA-3	Bristol Office Plaza New Building	1400 St. Gertrude Place Santa Ana, CA	Commercial	7,000 SF
SA-4	Anchor Stone Christian Church [1]	2938 Daimler Street Santa Ana, CA	Institution	3,843 SF

No.	Project	Address	Land Use	Size[2]
SA-5	Park 55 Development [1]	1221 Dyer Road Santa Ana, CA	Industrial	176,000 SF
City of Tustin				
T-1	Tustin Legacy Specific Plan Amendment	Portion of Neighborhood D & G Tustin, CA	SFR & MFR	4,466 DU
T-2	The Landing at Tustin Legacy	Portion of Neighborhood D South Tustin, CA	SFR & MFR	SFR: 114 DU MFR: 293 DU
T-3	ATEP - Goddard Preschool	1629 Victory Rd Tustin, CA	Institution	14,689 SF
T-4	ATEP - Saddleback Buildings	1634 Valencia Ave Tustin, CA	Institution	57,650 SF
T-5	ATEP - Advantech NA Campus	Red Hill Ave & Victory Rd Tustin, CA	Institution (Office & Warehouse)	Office: 109,117 SF Warehouse: 78,945 SF
T-6	ATEP - Legacy Medical Plaza	Red Hill Ave & Victory Rd Tustin, CA	Institution (Office & Warehouse)	Office: 108,942 SF Warehouse: 78,837 SF
T-7	The Hill Mixed Use Project	13751 & 13841 Red Hill Avenue Tustin, CA	Mixed Use (MFR & Commercial)	MFR: 137 Commercial: 7,000 SF
T-8	Farmers and Merchants Bank [1]	13612 Newport Ave Tustin, CA	Commercial	6,315 SF
T-9	City Ventures	14042 Newport Ave Tustin, CA	MFR	42 DU
T-10	Warner Corporate Plaza	1371 Warner Ave Tustin, CA	Business Park	19,000 SF
T-11	Centurion Plaza Redevelopment	15661 Red Hill Ave Tustin, CA	Warehouse	142,690 SF
T-12	New industrial buildings	1100 Valencia and 1101 Bell Tustin, CA	Industrial	311,770 SF
T-13	Panattoni 2 Industrial Building	14321 & 14351 Myford Tustin, CA	Industrial	148,437 SF
T-14	Conceptual Industrial Redevelopment	14511 Myford Tustin, CA	Industrial	103,480 SF
City of Irvine				
I-1	2602 McGaw Avenue	2602 McGaw Avenue Irvine, CA	MFR	184 DU
I-2	Westcliff University Childcare Facility	2941 Alton Parkway Irvine, CA	Institution (Office, Recreation, & Education)	22,367 SF

Notes: Multi-Family Residential (MFR). Single Family Residential (SFR)

[1] The project includes demolition and replacement of an existing use (non-vacant).

[2] Project size indicates the added dwelling units (DU) and/or square feet (SF) where expansion of existing facilities is proposed, not the total operational size.



Tustin Legacy Specific Plan Amendment SEIR
City of Tustin

Figure 5-1

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IMPACT SIGNIFICANCE CLASSIFICATIONS

The classifications below are used throughout the impact analysis in this Draft SEIR to describe the level of significance of environmental impacts. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines.

- **No Impact.** The Modified Project would not change the environment.
- **Less Than Significant.** The Modified Project would not cause any substantial, adverse change in the environment.
- **Less Than Significant with Mitigation Incorporated.** The Draft SEIR includes mitigation measures that avoid substantial adverse impacts on the environment.
- **Significant and Unavoidable.** The Modified Project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less-than-significant level.

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5.1 Air Quality

5.1.1 INTRODUCTION

This section provides an overview of the existing air quality within the City of Tustin and surrounding region, a summary of applicable regulations, and analyses of potential short-term and long-term air quality impacts from implementation of the Modified Project. Mitigation measures are recommended as necessary to reduce significant air quality impacts. This section is based upon the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Tustin Legacy Specific Plan Amendment*, as Amended in 2017
- *Tustin Legacy Specific Plan Amendment SEIR*
- *Tustin City Code*
- *Tustin Legacy Specific Plan Amendment Project Air Quality, Energy, and Greenhouse Gas Impact Report,* prepared by LSA, May 2024 (Appendix B)

5.1.2 REGULATORY SETTING

5.1.2.1 Federal Regulations

United States Environmental Protection Agency

Criteria Air Pollutants

At the federal level, the United States Environmental Protection Agency (USEPA) has been charged with implementing national air quality programs. The USEPA's air quality mandates are drawn primarily from the Federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments to the CAA were made by Congress in 1990.

The CAA requires the USEPA to establish National Ambient Air Quality Standards (NAAQS). The USEPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead. Table 5.1-1 shows the NAAQS for these pollutants. The CAA also requires each state to prepare an air quality control plan, referred to as a State Implementation Plan (SIP). The CAA Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified regularly, intervals can vary between one to a few years, to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. The USEPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and to determine whether implementing the SIPs will achieve air quality goals. If the USEPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area.

The USEPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking. The USEPA's primary role at the state level is to oversee state air quality

programs. The USEPA sets federal vehicle and stationary source emissions standards and provides research and guidance in air pollution programs.

Hazardous Air Pollutants

The USEPA has programs for identifying and regulating hazardous air pollutants (HAPs). Title III of the CAAA directed the USEPA to promulgate National Emissions Standards for HAPs (NESHAP). Major sources are defined as stationary sources with potential to emit more than 10 tons per year (tpy) of any HAP or more than 25 tpy of any combination of HAPs; all other sources are considered area sources. The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), the USEPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring maximum achievable control technology (MACT). For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), the USEPA promulgated health-risk-based emissions standards when deemed necessary, to address risks remaining after implementation of the technology-based NESHAP standards.

Table 5.1-1: Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when ROG and NO_X react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hours	0.07 ppm	0.075 ppm		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm	0.100 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Arithmetic Mean	0.030 ppm	0.053 ppm		
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm	75 ppb	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.50 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	Annual Arithmetic Mean	---	0.03 ppm		
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m^3	150 µg/m^3	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Arithmetic Mean	20 µg/m^3	---		
	24 hours	---	35 µg/m^3		

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m³	12 µg/m³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO_X, sulfur oxides, and organics.
Lead (Pb)	30 Day Average	1.5 µg/m³	---	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction (in severe cases).	*Present source:* lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	---	1.5 µg/m³		
	Rolling 3-Month Average	---	0.15 µg/m³		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)	Geothermal power plants, petroleum production and refining
Sulfates (SO_4)	24 hour	25 µg/m³	No National Standard	Decrease in ventilatory functions; aggravation of asthmatic symptoms; aggravation of cardio-pulmonary disease; vegetation damage; degradation of visibility; property damage.	Industrial processes.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See $PM_{2.5}$.

Note: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter.

The CAAA also required the USEPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions of, at a minimum, benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, Section 219 required the use of reformulated gasoline in selected areas with the most severe ozone nonattainment conditions to further reduce mobile-source emissions.

5.1.2.2 State Regulations

California Air Resources Board

Criteria Air Pollutants

The California Air Resources Board (CARB), a department of the California Environmental Protection Agency, oversees air quality planning and control throughout California. CARB is responsible for coordination and oversight of state and local air pollution control programs in California and for implementation of the

California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, requires CARB to establish the California Ambient Air Quality Standards (CAAQS). CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. Applicable CAAQS are also included in Table 5.1-1, above.

The CCAA requires all local air districts in the state to endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts shall focus particular attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources.

Among CARB's other responsibilities are overseeing compliance by local air districts with California and federal laws, approving local air quality plans, submitting SIPs to the USEPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

Diesel Regulations

The CARB and the Ports of Los Angeles and Long Beach have adopted several iterations of regulations for diesel trucks that are aimed at reducing diesel particulate matter (DPM). More specifically, the CARB Drayage Truck Regulation, the CARB statewide On-road Truck and Bus Regulation, and the Ports of Los Angeles and Long Beach "Clean Truck Program" (CTP) require accelerated implementation of "clean trucks" into the statewide truck fleet. In other words, older more polluting trucks will be replaced with newer, cleaner trucks as a function of these regulatory requirements. Moreover, the average statewide DPM emissions for Heavy Duty Trucks (HHDT), in terms of grams of DPM generated per mile traveled, will dramatically be reduced due to these regulatory requirements. Diesel emissions identified in this analysis would overstate future DPM emissions because not all the regulatory requirements are reflected in the modeling.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are airborne substances capable of causing short-term (acute) and long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Air quality regulations also focus on TACs. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no safe level of exposure. This contrasts with the criteria air pollutants, for which acceptable levels of exposure can be determined and for which the ambient standards have been established. Instead, the USEPA and CARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum achievable control technology or best available control technology for toxics and to limit emissions. These statutes and regulations, in conjunction with additional rules set forth by the districts, establish the regulatory framework for TACs.

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807 [Chapter 1047, Statutes of 1983]) and the Air Toxics Hot Spots Information and Assessment Act (Hot Spots Act) (AB 2588 [Chapter 1252, Statutes of 1987]). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted the USEPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC.

If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate best available control technology to minimize emissions.

The Air Toxics Hot Spots Information and Assessment Act requires existing facilities emitting toxic substances above a specified level to prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

CARB published the Air Quality and Land Use Handbook: A Community Health Perspective (Handbook), which provides guidance concerning land use compatibility with TAC sources (CARB, 2005). Although it is not a law or adopted policy, the Handbook offers advisory recommendations for the siting of sensitive receptors near uses associated with TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities, to help keep children and other sensitive populations out of harm's way. In addition, CARB has promulgated the following specific rules to limit TAC emissions:

- **CARB Rule 2485** (13 CCR, Chapter 10 Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- **CARB Rule 2480** (13 CCR Chapter 10 Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- **CARB Rule 2477** (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

California Code of Regulations (CCR) Title 13, Motor Vehicles, Section 2449(d)(3)

No vehicle or engines subject to this regulation may idle for more than 5 consecutive minutes. The idling limit does not apply to:

- Idling when queuing,
- Idling to verify that the vehicle is in safe operating condition,
- Idling for testing, servicing, repairing or diagnostic purposes,
- Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane),
- Idling required to bring the machine system to operating temperature, and
- Idling necessary to ensure safe operation of the vehicle.

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CALGreen) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 update that is applicable to building permit applications submitted after January 1, 2023. The updated 2022 standards focus on the following:

- Encouraging electric heat pump technology and use. Heat pumps use less energy and produce fewer emissions than traditional HVACs and water heaters.
- Establishing electric-ready requirements when natural gas is installed to provide for electric heating, cooking, and electric vehicle (EV) charging.
- Expanding solar photovoltaic (PV) system and battery storage standards.
- Strengthening ventilation standards to improve indoor air quality.

Indoor air quality within mechanically ventilated buildings is regulated by Section 5.504.5.3 (Filters) of the California Green Building Standards Code Part 11 that requires at least a Minimum Efficiency Reporting Value (MERV) of 13 air filtration systems for new buildings. The Code requires MERV 13 filters to be installed prior to occupancy and replaced and/or maintained as directed by the manufacturer.

In addition to these updated standards, the CALGreen standards that are applicable to the Modified Project include, but are not limited to, the following:

- Short-term bicycle parking. Provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.
- Designated parking for clean air vehicles. Provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Title 24 Part 6 Table 5.106.5.2.
- Electric vehicle charging stations. Facilitate the future installation of electric vehicle supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight, and glare ratings per Title 24 Part 6 Table 5.106.8.
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste.
- Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals.
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush.
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush.
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute. Metering faucets shall not deliver more than 0.20 gallons per cycle. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per cycle.
- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent.
- Water meters. Separate submeters or metering devices shall be installed for new buildings or where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day.

- Outdoor water use in rehabilitated landscape projects equal to or greater than 2,500 SF. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF requiring a building or landscape permit.
- Commissioning. For new buildings 10,000 SF and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements.

The 2022 CALGreen Building Standards Code has been adopted by the City of Tustin by reference in Municipal Code Section 8100.

5.1.2.3 Local and Regional Regulations

SCAQMD

Criteria Air Pollutants

South Coast Air Quality Management District (SCAQMD) attains and maintains air quality conditions in the South Coast Air Basin (Basin) through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SCAQMD includes preparation of plans for attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. SCAQMD also inspects stationary sources of air pollution and responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements programs and regulations required by the CAA, CAAA, and CCAA. Air quality plans applicable to the Modified Project are discussed below.

Air Quality Management Plan

SCAQMD and the Southern California Association of Governments (SCAG) are responsible for preparing the Air Quality Management Plan (AQMP), which addresses federal and State CAA requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin.

SCAG is mandated by law to develop a long-term regional transportation and sustainability plan every four years. The most recently adopted AQMP is the 2022 AQMP that was adopted by the SCAQMD Governing Board on December 2, 2022. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NOx technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 federal 8-hour ozone standard. SCAQMD proposes a total of 49 control measures for the 2022 AQMP, including control measures focused on widespread deployment of zero emission and low NOx technologies through a combination of regulatory approaches and incentives.

SCAQMD Rules and Regulations

All projects are subject to SCAQMD rules and regulations. Specific rules applicable to the Modified Project include the following:

Rule 203 – Permit to Operate. A person shall not operate or use any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants, or the use of which may reduce or control the issuance of air contaminants, without first obtaining a written permit to operate from the Executive Officer

or except as provided in Rule 202. The equipment or agricultural permit unit shall not be operated contrary to the conditions specified in the permit to operate.

Rule 401 – Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

Rule 402 – Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Rule 403 – Fugitive Dust. SCAQMD Rule 403 governs emissions of fugitive dust during and after construction. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires project applicants to control fugitive dust using the best available control measures such that dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating an offsite nuisance. Applicable Rule 403 dust suppression (and PM_{10} generation) techniques to reduce impacts on nearby sensitive receptors may include, but are not limited to, the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. Locations where grading is to occur shall be thoroughly watered prior to earthmoving.
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.
- Suspend all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Provide bumper strips or similar best management practices where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replant disturbed areas as soon as practical.
- Sweep onsite streets (and offsite streets if silt is carried to adjacent public thoroughfares) to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, *Less Polluting Sweepers*.

Rule 431.2 – Sulfur Content of Liquid Fuels. This rule limits the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of sulfur oxides and particulates during combustion and to enable the use of add-on control devices for diesel fueled internal combustion engines.

Rule 445 – Wood Burning. This rule prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for

aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

Rule 481 – Spray Coating. This rule applies to all spray painting and spray coating operations and equipment and states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

- The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.
- Coatings are applied with high-volume low-pressure, electrostatic and/or airless spray equipment.
- An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.

Rule 1108 – Volatile Organic Compounds. This rule governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the Basin. This rule also regulates the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the Modified Project must comply with SCAQMD Rule 1108.

Rule 1113 – Architectural Coatings. No person shall apply or solicit the application of any architectural coating within the SCAQMD with VOC content in excess of the values specified in the Rule. The VOC levels of paints are provided at the following SCAQMD website: http://xappprod.aqmd.gov/PublicProductSearch/PublicProductSearch.aspx. All paints will be applied using either high volume low-pressure spray equipment or by hand application.

Rule 1143 – Paint Thinners and Solvents. This rule governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

Rule 1186 – Emissions from Paved and Unpaved Roads. The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of vehicular travel and requires that any owner or operator of a paved public road on which there is visible roadway accumulations shall begin removal of such material through street cleaning within 72 hours of any notification of the accumulation and shall completely remove such material as soon as feasible.

Rule 1186.1 – Less-Polluting Sweepers. This rule requires public and private sweeper fleet operators to acquire alternative-fuel or otherwise less-polluting sweepers when purchasing or leasing these vehicles for sweeping operations.

City of Tustin General Plan

The City of Tustin addresses air quality in the Conservation, Open Space, and Recreation Element of the General Plan. The Conservation, Open Space, and Recreation Element contains policies that work to improve air quality and reduce particulate emissions. The following policies are applicable to the Modified Project:

Goal 1 Reduce air pollution through proper land use, transportation and energy use planning.

Policy 1.1 Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.

Policy 1.2 Design safe and efficient vehicular access to commercial land uses from arterial streets to insure efficient vehicular ingress and egress.

Policy 1.3 Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.7 Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.

Goal 2 **Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.**

Policy 2.1 Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2 Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.6 Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.

Policy 2.7 Encourage employer rideshare and transit incentives programs by local businesses.

Policy 2.8 Manage non-residential parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed

5.1.3 ENVIRONMENTAL SETTING

5.1.3.1 Climate and Meteorology

The City of Tustin is located within the South Coast Air Basin (Basin), which is under the jurisdiction of the SCAQMD. The Basin is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County.

The ambient concentrations of air pollutants are determined by the amount of emissions released by sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the volume of emissions released by existing air pollutant sources.

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The topography and climate of Southern California combine to make the Basin an area of high air pollution potential. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is disrupted occasionally by periods of extremely hot weather, winter storms, or winds. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's

surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions which produce ozone.

5.1.3.2 Criteria Air Pollutants

As described previously under Section 5.1.2, *Regulatory Setting*, the CARB and the USEPA currently focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead. These pollutants are referred to as "criteria air pollutants" because they are the most prevalent air pollutants known to be injurious to human health. Extensive health-effects criteria documents regarding the effects of these pollutants on human health and welfare have been prepared over the years.[1] Standards have been established for each criteria pollutant to meet specific public health and welfare criteria set forth in the federal CAA. California has generally adopted more stringent ambient air quality standards for the criteria air pollutants (CAAQS or state standards) and has adopted air quality standards for some pollutants for which there is no corresponding national standard (NAAQS), such as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Ozone. Ozone, the main component of photochemical smog, is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROGs) or volatile organic compounds (VOCs), and oxides of nitrogen (NO_X). While both ROGs and VOCs refer to compounds of carbon, ROG is a term used by CARB and is based on a list of exempted carbon compounds determined by CARB. VOC is a term used by the USEPA and is based on its own exempt list. The time period required for ozone formation allows the reacting compounds to spread over a large area, producing regional pollution problems. Ozone concentrations are the cumulative result of regional development patterns rather than the result of a few significant emission sources.

Once ozone is formed, it remains in the atmosphere for one or two days. Ozone is then eliminated through reaction with chemicals on the leaves of plants, attachment to water droplets as they fall to earth ("rainout"), or absorption by water molecules in clouds that later fall to earth with rain ("washout"). Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. In addition to causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide. CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Nitrogen Dioxide. NO_2 is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are

[1] Additional sources of information on the health effects of criteria pollutants can be found at CARB and USEPA's websites at http://www.arb.ca.gov/research/health/health.htm and https://www.epa.gov/criteria-air-pollutants, respectively.

referred to as NO_X, which are reported as equivalent NO_2. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Sulfur Dioxide. SO_2 is a colorless, extremely irritating gas or liquid that enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfur trioxide (SO_3). Collectively, these pollutants are referred to as sulfur oxides (SO_X). Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of SO_2 aggravate lung diseases, especially bronchitis. This compound also constricts the breathing passages, especially in people with asthma and people involved in moderate to heavy exercise. SO_2 potentially causes wheezing, shortness of breath, and coughing. Long-term SO_2 exposure has been associated with increased risk of mortality from respiratory or cardiovascular disease.

Particulate Matter. PM_{10} and $PM_{2.5}$ consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively (a micron is one-millionth of a meter). PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis and respiratory illnesses in children. Particulate matter can also damage materials and reduce visibility. One common source of $PM_{2.5}$ is diesel exhaust emissions.

PM_{10} consists of particulate matter emitted directly into the air (e.g., fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, and natural windblown dust) and particulate matter formed in the atmosphere by condensation and/or transformation of SO_2 and ROG. Traffic generates particulate matter emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM_{10} and $PM_{2.5}$ are also emitted by burning wood in residential wood stoves and fireplaces and open agricultural burning. $PM_{2.5}$ can also be formed through secondary processes such as airborne reactions with certain pollutant precursors, including ROGs, ammonia (NH_3), NO_X, and SO_X.

Lead. Lead is a metal found naturally in the environment and present in some manufactured products. There are a variety of activities that can contribute to lead emissions, which are grouped into two general categories, stationary and mobile sources. On-road mobile sources include light-duty automobiles; light-, medium-, and heavy-duty trucks; and motorcycles. Emissions of lead have dropped substantially over the past 40 years. The reduction before 1990 is largely due to the phase-out of lead as an anti-knock agent in gasoline for on-road automobiles. Substantial emission reductions have also been achieved due to enhanced controls in the metals processing industry. In the Basin, atmospheric lead is generated almost entirely by the combustion of leaded gasoline and contributes less than one percent of the material collected as total suspended particulates.

5.1.3.3 Existing Conditions

SCAQMD maintains monitoring stations within district boundaries that monitor air quality and compliance with associated ambient standards. The Modified Project site is located within the monitoring boundary of the Anaheim-Pampas Lane monitoring station (SRA 17), located at 1630 Pampas Lane in Anaheim, which is approximately 14 miles northwest of the TLSP area. The most recent 3 years of data is shown on Table 5.1-2 and identifies the number of days ambient air quality standards were exceeded in the area.

The federal PM_{10} standard had no exceedances. The state PM_{10} standard was exceeded 5 times in 2020, 1 time in 2021, and 1 time in 2022. The federal $PM_{2.5}$ standard had 12 exceedances in 2020, 10

exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standard was exceeded 6 times in 2021, no times in 2021, and once in 2022. The State 8-hour ozone standard was exceeded 16 times in 2020, no times in 2021, and once in 2022. The federal 8-hour standard was exceeded 15 times in 2021, no times in 2021, and once in 2022. The CO and NO_2 standards were not exceeded in this area during the 3-year period.

Table 5.1-2: Air Quality Monitoring Summary 2020-2022

Pollutant	Standard	2020	2021	2022
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		2.3	2.1	2.4
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.7	1.5	1.4
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.142	0.089	0.102
Number of days exceeded:	State: > 0.09 ppm	6	0	1
Maximum 8-hour concentration (ppm)		0.098	0.068	0.077
Number of days exceeded:	State: > 0.07 ppm	16	0	1
	Federal: > 0.07 ppm	15	0	1
Coarse Particulates (PM_{10})				
Maximum 24-hour concentration ($\mu g/m^3$)		74.8	63.6	67.0
Number of days exceeded:	State: > 50 $\mu g/m^3$	5	1	1
	Federal: > 150 $\mu g/m^3$	0	0	0
Annual arithmetic average concentration ($\mu g/m^3$)		30.8	23.4	20.9
Exceeded for the year:	State: > 20 $\mu g/m^3$	Yes	Yes	Yes
	Federal: > 50 $\mu g/m^3$	No	No	No
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hour concentration ($\mu g/m^3$)		64.8	54.4	33.1
Number of days exceeded:	Federal: > 35 $\mu g/m^3$	12	10	0
Annual arithmetic average concentration ($\mu g/m^3$)		12.4	11.6	9.9
Exceeded for the year:	State: > 12 $\mu g/m^3$	Yes	No	No
	Federal: > 12 $\mu g/m^3$ [a]	No	No	No
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.071	0.067	0.053
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.013	0.012	0.012
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No

a. On February 7, 2024, the federal annual $PM_{2.5}$ standard was revised from 12.0 $\mu g/m^3$ to 9.0 $\mu g/m^3$. Because the data presented is through 2022, it is uses the 12.0 $\mu g/m^3$ standard that was in effect through 2022.
$\mu g/m^3$ = micrograms per cubic meter
ND = No data. There were insufficient (or no) data to determine the value.
ppm = parts per million
Source: *Air Quality, Energy, and Greenhouse Gas Impact Analysis* (Appendix B)

Both CARB and the USEPA use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are

nonattainment, attainment, and unclassified. Nonattainment is defined as any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the primary or secondary ambient air quality standard for the pollutant. Attainment is defined as any area that meets the primary or secondary ambient air quality standard for the pollutant. Unclassifiable is defined as any area that cannot be classified on the basis of available information as meeting or not meeting the primary or secondary ambient air quality standard for the pollutant. In addition, California designations include a subcategory of nonattainment-transitional, which is given to nonattainment areas that are progressing and nearing attainment.

The Basin is currently designated as a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$ under the CAAQS, as well as the $PM_{2.5}$ under the NAAQS. The Basin is designated as attainment or unclassified for the remaining CAAQS and NAAQS. See Table 5.1-3, for attainment designations for the Basin.

Table 5.1-3: Attainment Status of Criteria Pollutants in the Basin

Pollutant	State	Federal
O_3 1 hour	Nonattainment	Extreme Nonattainment
O_3 8 hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	N/A	Attainment/Unclassified
Lead	Attainment	Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Notes:
[1] Except in Los Angeles County
CO = carbon monoxide, NO_2 = nitrogen dioxide, O_3 = ozone, PM_{10} = particulate matter less than 10 microns in size, $PM_{2.5}$ = particulate matter less than 2.5 microns in size, SO_2 = sulfur dioxide, N/A = not applicable
Source: *Air Quality, Energy, and Greenhouse Gas Impact Analysis* (Appendix B)

Sensitive Land Uses

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive to poor air quality than the general public because the population groups associated with these uses have increased susceptibility to respiratory distress. In addition, residential uses are considered more sensitive to air quality conditions than commercial and industrial uses, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation.

The Modified Project considers changes to the Approved Project through a proposed SPA. The Approved Project considers buildout of the TLSP as a whole and does not analyze the environmental impact of the Modified Project onto itself, but rather impacts on the surrounding area. Existing sensitive air quality receptors outside of the TLSP area where someone can remain for 24-hours in the vicinity of the Modified Project site consists of residences. The closest existing sensitive receptors are residences, The Bowery, located approximately 140 feet west of the TLSP boundary (see Figure 5-1, *Cumulative Projects*). However, in consideration that buildout of the TLSP has and will continue to occur over multiple phases, future sensitive

receptors within 50 feet of the Modified Project site have been conservatively considered for analysis of the Modified Project site (to account of existing and future onsite and offsite receptors).

5.1.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan;

AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the Modified Project region is non-attainment under an applicable federal or state ambient air quality standard;

AQ-3 Expose sensitive receptors to substantial pollutant concentrations; or

AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Regional Thresholds

The SCAQMD's regional significance thresholds are listed in Table 5.1-4. The SCAQMD's CEQA air quality methodology provides that any projects that result in daily emissions that exceed any of these thresholds would have both an individually (project-level) and cumulatively significant air quality impact.

Table 5.1-4: SCAQMD Regional Air Quality Thresholds

Pollutant	Construction	Operations
Reactive Organic Gases (ROG)	*75*	*55*
Carbon Monoxide (CO)	*550*	*550*
Nitrogen Oxides (NO_X)	100	*55*
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM_{10})	150	150
Fine Particulates ($PM_{2.5}$)	*55*	*55*

Localized Significance Thresholds

SCAQMD has also developed localized significance thresholds (LSTs) that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or contribute to localized air quality impacts. LSTs are developed based on the ambient concentrations of that pollutant for each of the 38 source receptor areas (SRAs) in the Basin. The Modified Project site is located within Central Orange County (SRA 17). The localized thresholds, which are found in the mass rate look-up tables in the "Final Localized Significance Threshold Methodology" document prepared by SCAQMD, were developed for use on projects that are less than or equal to 5-acres in size and are only applicable to the following criteria pollutants: NOx, CO, PM_{10}, and $PM_{2.5}$.

The Modified Project's construction activities could actively disturb approximately 5.0 acres per day during grading activities. The applicable SCAQMD localized thresholds from the *Final Localized Significance Threshold Methodology* document's mass rate look-up tables are used to evaluate construction emissions. The applicable LSTs construction thresholds for grading up to 5 acres per day at 82 feet (25 meters), which is the closest sensitive receptor threshold provided by SCAQMD for LSTs, are provided in Table 5.1-5.

Table 5.1-5: SCAQMD Localized Significance Construction Thresholds at 25 Meters

Project Size	Maximum Pounds Per Day			
	NO_X	CO	PM_{10}	$PM_{2.5}$
1 Acre	81.0	485.0	4.0	3.0
2 Acres	115.0	715.0	6.0	4.0
5 Acres	183.0	1,253.0	13.0	7.0

Source: *Air Quality, Energy, and Greenhouse Gas Impact Analysis* (Appendix B)

CO Hotspots Thresholds

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles and introduction of cleaner fuels as well as implementation of control technology on industrial facilities, CO concentrations in the South Coast Air Basin and the state have steadily declined.

The analysis identifies whether ambient CO levels in the vicinity of the Modified Project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the following 1-hour or 8-hour standards:

- California State 1-hour CO standard of 20 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

5.1.5 METHODOLOGY

This analysis focuses on the nature and magnitude of the change in the air quality environment due to implementation of the Modified Project, based on the maximum development assumptions that are outlined in Section 3, *Project Description*. Air pollutant emissions associated with the Modified Project would result from construction equipment usage and from construction-related traffic. Additionally, emissions would be generated from operations of the future residential buildings and from traffic generated by the new residences. The net increase in emissions generated by these activities and other secondary sources have been quantitatively estimated and compared to the applicable thresholds of significance recommended by SCAQMD.

AQMP Consistency

SCAQMD's CEQA Handbook suggests an evaluation of the following two criteria to determine whether a project involving a legislative land use action (such as the proposed General Plan land use and zoning designation changes) would be consistent or in conflict with the AQMP:

1. The Modified Project would not generate population and employment growth that would be inconsistent with SCAG's growth forecasts.

2. The Modified Project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Consistency Criterion No. 1 refers to the SCAG's growth forecast and associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's growth projections, which are based, in part, on the general plans of cities located within the SCAG region. Therefore, if the level of housing related to the Modified Project is consistent with the applicable assumptions used in the development of the AQMP, the Modified Project would not jeopardize attainment of the air quality levels identified in the AQMP.

Consistency Criterion No. 2 refers to the CAAQS. An impact would occur if the long-term emissions associated with the Modified Project would exceed SCAQMD's regional significance thresholds for operation-phase emissions.

Construction

Short-term construction-generated emissions of criteria air pollutants and ozone precursors from development of the proposed TLSP Amendment buildout were assessed in accordance with methods recommended by SCAQMD. The Modified Project's regional emissions were modeled using the California Emissions Estimator Model (CalEEMod), as recommended by SCAQMD. CalEEMod was used to determine whether short-term construction-related emissions of criteria air pollutants would exceed applicable regional thresholds and where mitigation would be required. Modeling was based on Project-specific data and predicted short-term construction-generated emissions were compared with applicable SCAQMD regional thresholds for determination of significance.

In addition, to determine whether or not construction activities associated with development of the Modified Project would create significant adverse localized air quality impacts on nearby sensitive receptors, the worst-case daily emissions contribution from the Modified Project were compared to SCAQMD's LSTs that are based on the pounds of emissions per day that can be generated by a project without causing or contributing to adverse localized air quality impacts. The daily total onsite combustion, mobile, and fugitive dust emissions associated with construction were evaluated against SCAQMD's LSTs as appropriate for each activity.

Operations

Long-term (i.e., operational) regional emissions of criteria air pollutants and precursors, including mobile- and area-source emissions from the Modified Project, were also quantified using the CalEEMod computer model. Area-source emissions were modeled according to the size and type of the land uses proposed. Mass mobile-source emissions were modeled based on the increase in daily vehicle trips that would result from buildout of the proposed TLSP Amendment. Trip generation rates were available from the *Vehicle Miles Traveled (VMT) Study* prepared for the Modified Project (see Appendix D of this Draft SEIR). Predicted long-term operational emissions were compared with applicable SCAQMD thresholds for determination of significance.

5.1.6 ENVIRONMENTAL IMPACTS

Summary of Impacts Previously Identified

The certified FEIS/EIR addressed consistency of the MCAS Specific Plan with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plans (AQMPs), construction-related emissions,

operational emissions, localized carbon monoxide (CO) "hotspots," and air toxics. The FEIS/EIR concluded that the MCAS Tustin Specific Plan would not be consistent with the 1994 and 1997 AQMPs because these plans did not consider the planned intensity assumed by the Specific Plan. This impact was significant and unavoidable, and a statement of overriding considerations was adopted.

The FEIS/EIR concluded that there were significant and unavoidable construction-related (short-term) emissions that exceeded the SCAQMD thresholds. Even with incorporation of mitigation measures, impacts were determined to remain significant and a statement of overriding considerations was adopted.

Operational emissions were also considered significant and unavoidable even with implementation of the City's Traffic Reduction/Traffic Demand Management program (Ordinance No. 1062, approved in 1991), which has policies to reduce long-term emissions. A statement of overriding considerations was adopted for this impact. However, the FEIS/EIR concluded that operational emissions from businesses would comply with SCAQMD's regulations for operation and would be less than significant.

The FEIS/EIR concluded that no sensitive receptors would be exposed to CO hotspots. The analysis included intersections with the highest traffic volumes and LOS during the years 2005 and 2020.

Air quality impacts were then subsequently analyzed within the following previously approved CEQA documents:

- The 2004 Supplemental EIR determined that the Modified Project would not result in new additional impacts and the implementation of Tustin Ranch Road would be consistent with applicable policies and would reduce overall CO Hotspot impacts. However, the impact of the Approved Project on air quality would remain significant and unavoidable.
- The 2006 Addendum concluded that there was no substantial change and a reduced impact due to the reduction of nonresidential square footage and redistribution of residential uses. The Modified Project incorporated all applicable mitigation measures and revised MM AQ-1 to reflect amendments to Rules 402 and 403. No new impacts were identified.
- The 2013 Addendum analyzed a specific project and updated the air quality analysis to identify construction and operational related impacts resulting from the construction of up to 816,929 square feet of academic office space and the extension of Bell Avenue. Based on this analysis it was determined that SCAQMD thresholds would not be exceeded, and no new significant impacts would occur.
- Because the 2016 Air Quality Management Plan (AQMP) was being drafted at the time that the 2017 SEIR was released, the thresholds in the 2017 SEIR were based on the adopted 2012 AQMP. The 2017 SEIR found that the 2012 AQMP would not accommodate more dwelling units associated with the 2017 TLSP SPA, and these additional residential units weren't accounted for (2017 Draft SEIR, p. 5.1-19). Therefore, the Approved Project was found to be inconsistent with the 2012 AQMP.
- Compared to the Adopted Specific Plan as quantified using CalEEMod, the 2017 SPA was determined to result in an increase in VOC, CO, SO_X, PM_{10}, and $PM_{2.5}$ air pollutant emissions (2017 Draft SEIR, p. 5.1-20). However, the net change in emissions would not exceed SCAQMD's regional significance thresholds for construction emissions. Therefore, there would not be a substantial increase in the severity of previously identified impacts regarding construction emissions.
- The total emissions associated with implementation of the Modified Project were identified to exceed the SCAQMD operation-related regional significance thresholds for all of the criteria air pollutants except for SO_2 (2017 Draft SEIR, p. 5.1-20). This result is similar to the total long-term emissions associated with the Adopted Specific Plan. However, implementation of the Modified Project was found to result in reduced emissions for NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ when compared to the Adopted Specific Plan, due to an anticipated decrease in vehicle trips associated with the 2017 TLSP SPA.
- Findings of the 2017 SEIR anticipated that the Modified Project and Adopted Specific Plan would generate similar localized construction-related emissions and would both result in a significant localized

construction-related emissions impacts (2017 Draft SEIR, p. 5.1-24). Therefore, no new significant impacts would occur.

- The Initial Study prepared for the 2017 SEIR determined that the proposed change in land use mix from nonresidential to residential would not generate a substantial increase in odor generation and no new impacts on objectionable odors would occur (PlaceWorks, 2015, p. A-50). However, the Modified Project would accommodate more dwelling units, and the growth associated with these additional residential land uses is accounted for in the 2012 AQMP. Therefore, similar to the Adopted Specific Plan, the Modified Project was determined inconsistent with the 2012 AQMP and impacts were determined to be significant and unavoidable.

Proposed TLSP Amendment Project

Since certification of the FEIS/EIR and subsequent analyses, there have been several changes to the regulatory environment. On October 1, 2015, the USEPA strengthened the NAAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb). The South Coast Air Basin is classified as an "extreme" nonattainment area for the 2015 Ozone NAAQS. The 2022 AQMP was developed to address the requirements for meeting this standard and was adopted December 2, 2022, by the South Coast AQMD Governing Board. Additionally, a newer version (version 2020.4.0) of CalEEMod was released that has updated emissions factors. Therefore, the emissions calculated for the Adopted TLSP used a version of the model that is now outdated.

IMPACT AQ-1: THE MODIFIED PROJECT WOULD RESULT IN A CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN.

Significant and Unavoidable Impact. The SCAQMD's 2022 AQMP, which was adopted on December 2, 2022, is the applicable air quality plan for the City of Tustin. Pursuant to Consistency Criterion No. 1, the SCAQMD AQMP is the applicable air quality plan for the Modified Project. Projects that are consistent with the regional population, housing, and employment forecasts identified by SCAG are considered consistent with the AQMP growth projections, since the forecast assumptions by SCAG forms the basis of the land use and transportation control portions of the AQMP. Additionally, because SCAG's regional growth forecasts are based upon, among other things, land uses designated in general plans and specific plans, a project that is consistent with the land use designated in a general plan would also be consistent with the SCAG's regional forecast projections, and thus also with the AQMP growth projections.

The Modified Project would increase the TLSP residential capacity to be consistent with the 2021–2029 Housing Element Update. As discussed in the Modified Project Description, the proposed TLSP Amendment would add a total of 855 additional residential units to the existing residential capacity, in addition to 1,356 buffer units that are intended to make up for any potential units that are not developed on the other Housing Element Update sites. Also, the application of density bonuses for 2,759 units have been included. Together, the Housing Element Update RHNA units, buffer units, and density bonus; total buildout of the proposed TLSP Amendment would provide for 4,970 units.

The AQMP growth assumptions and the Modified Projections in the AQMP for achieving air quality goals are based on the SCAG's RTP/SCS household and employment growth trends. According to SCAG's 2024-2050 RTP/SCS (Connect SoCal, 2024), the City's households and employment are forecast to increase by approximately 7,000 households, and 19,600 jobs, respectively, between 2019 and 2050 (Southern California Association of Governments, 2024). The additional 4,970 housing units included in the proposed TLSP Amendment would not exceed the SCAG RTP/SCS projected growth; but would rather accommodate the City's required housing pursuant to the SCAG RHNA, as provided for in the City's Housing Element.

The City's 2021–2029 Housing Element identifies several adequate sites, including the proposed TLSP Amendment area, that are able to accommodate the development of additional housing units for the City to

meet its housing needs identified in the SCAG's RHNA allocation. The proposed TLSP Amendment would provide consistency with the Housing Element. In addition, the new housing included in the TLSP Amendment would accommodate the RTP/SCS projection of 19,600 new jobs within the City by 2050. Therefore, since the purpose of the Modified Project is to accommodate planned regional housing growth included in the SCAG RHNA, the Modified Project would not exceed the growth assumptions in the SCAG's 2024-2050 RTP/SCS or the AQMP.

In addition, implementing residential development within the TLSP area would utilize existing infrastructure such as roadways, drainage, sewer, water, and other utilities, and would be consistent with the SCAG objective to "Encourage patterns of urban development and land use that reduce costs in infrastructure construction and make better use of existing facilities." As a result, the Modified Project would comply with Consistency Criterion No. 1 listed above in the Methodology Section.

Regarding Consistency Criterion No. 2, which evaluates the potential of the Modified Project to increase the frequency or severity of existing air quality violations; as described previously, an impact related to Consistency Criterion No. 2 would occur if the long-term emissions associated with the Modified Project would exceed SCAQMD's regional significance thresholds for operation-phase emissions. As detailed below in Impact AQ-2, operation of the Modified Project would exceed the threshold of significance for emissions of VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, the Modified Project would result in an impact related to Consistency Criterion No. 2. As a result, impacts related to consistency with the AQMP would be significant and unavoidable. This is consistent with the impacts identified in the 2017 SEIR.

Overall, despite the Modified Project's consistency with SCAG's 2024-2050 RTP/SCS growth forecasts and the City's Housing Element, the proposed TLSP Amendment would lead to increased regional air quality operational emissions that would exceed thresholds. Therefore, the Modified Project would result in a conflict with, or obstruct, implementation of the AQMP and impacts would be significant and unavoidable. This finding is consistent with the findings of the 2017 SEIR, therefore no new significant impacts would occur.

IMPACT AQ-2: THE MODIFIED PROJECT WOULD RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF A CRITERIA POLLUTANT FOR WHICH THE MODIFIED PROJECT REGION IS IN NON-ATTAINMENT UNDER AN APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARD.

Construction

Less than Significant. Construction activities associated with the Modified Project would occur in phases and result in emissions of CO, VOCs, NOx, SOx, PM_{10}, and $PM_{2.5}$. Pollutant emissions associated with construction would be generated from the following: (1) demolition, grading, and excavation; (2) construction workers traveling to and from the Modified Project site; (3) delivery and hauling of construction supplies to, and debris and soils export from, the Modified Project site; (4) fuel combustion by onsite construction equipment; (5) building construction; application of architectural coatings; and paving. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. However, construction activities would be limited to the hours between 7:00 am to 6:00 pm, Monday through Friday, and 5:00 pm and 9:00 am on Saturdays, excluding federal holidays, per Municipal Code Section 4616.

The construction phasing for the Modified Project is planned to be implemented over a 20-year period between 2025 and 2045. The maximum daily construction emissions were estimated using CalEEMod; and the modeling includes compliance with SCAQMD Rules 403, 431.2, 1113, and 1186 / 1186.1 (described above), which are requirements that would reduce air contaminants during construction. In addition, SEIR MM AQ-5 requires use of Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities, which included in the modeling assumptions. Also, SEIR MM AQ-2 requires low VOC architectural coatings for all interior and exterior painting operations.

Table 5.1-6 provides the maximum daily unmitigated emissions of criteria air pollutants from construction of the additional residential units and shows that SCAQMD thresholds would not be exceeded and therefore, impacts would be less than significant, and no new construction related emissions impacts would occur.

Table 5.1-6: Maximum Peak Unmitigated Construction Emissions

Project Construction	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project Peak Daily Emissions	38.0	43.7	188.0	0.2	55.0	13.4
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: CO = carbon monoxide, lbs/day = pounds per day, NOx = nitrogen oxides, $PM_{2.5}$ = particulate matter less than 2.5 microns in size, PM_{10} = particulate matter less than 10 microns in size, SCAQMD = South Coast Air Quality Management District, SOx = sulfur oxides, VOCs = volatile organic compounds.
Source: *Air Quality, Energy, and Greenhouse Gas Impact Analysis* (Appendix B)

Operation

Significant and Unavoidable Impact. Implementation of the Modified Project would result in long-term emissions of criteria air pollutants from area sources generated by the proposed residential uses, such as vehicular emissions, natural gas consumption, landscaping, applications of architectural coatings, and use of consumer products.

The emissions from the Modified Project are primarily from vehicle trips. As described in Section 5.14, *Transportation*, the Modified Project would generate an increase in 15,678 daily trips. As shown in Table 5.1-7, the emissions associated with the increased residential development within the TLSC area would result in exceedance of SCAQMD thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$, which is consistent with the threshold exceedances that would occur from buildout of the existing TLSP. Due to the increase in vehicle trips and localized emissions from the increase in residences proposed by the Modified Project, the exceedance of the thresholds would be exacerbated compared to buildout of the existing TLSP.

Table 5.1-7: Unmitigated Operational Emissions

Emission Type	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Approved Project						
Approved Project Mobile Sources	215.0	115.7	1,473.0	4.0	464.1	118.7
Approved Project Area Sources	228.1	68.9	416.3	0.5	5.9	5.8
Approved Project Energy Sources	1.3	22.4	12.9	0.1	1.8	1.8
Total Approved Project Emissions	**444.4**	**207.1**	**1,902.2**	**4.6**	**471.7**	**126.3**
SCAQMD Thresholds	55.0	55.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
Proposed Modified Project						
Modified Project Mobile Sources	217.5	120.0	1,551.9	4.2	497.6	127.3
Modified Project Area Sources	391.9	144.5	776.9	1.0	12.2	12.1
Modified Project Energy Sources	2.9	50.0	27.4	0.3	4.0	4.0
Total Modified Project Emissions	**612.3**	**314.5**	**2,356.1**	**5.5**	**513.8**	**143.3**
SCAQMD Thresholds	55.0	55.0	550.0	150.0	150.0	55.0
Exceeds Threshold??	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Emission Type	Pollutant Emissions (lbs/day)					
	VOCs	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Increase in Emissions (Modified Project – Approved Project)	167.9	107.4	453.9	0.9	42.1	17.0

Notes: CO = carbon monoxide, lbs/day = pounds per day, NOx = nitrogen oxides, $PM_{2.5}$ = particulate matter less than 2.5 microns in size, PM_{10} = particulate matter less than 10 microns in size, SCAQMD = South Coast Air Quality Management District, SOx = sulfur oxides, VOCs = volatile organic compounds.
Source: Air Quality, Energy, and Greenhouse Gas Impact Analysis, Appendix B.

Therefore, the City has included Mitigation Measures AQ-1 though AQ-4, which require distribution of trip reduction opportunities, prohibition of fireplaces, required use of electric landscaping equipment, and use of low VOC paint, which would reduce emissions. However, the majority of the Modified Project's emission exceedances are from vehicular trips consumer products that the City cannot control emissions of; and therefore, cannot feasibly be reduced below the SCAQMD thresholds. As a result, impacts from operations of the proposed TLSP Amendment would be significant and unavoidable, which is consistent with the findings of the 2017 SEIR. However, the volume of emissions would be increased in comparison to the buildout of the existing TLSP.

Health Impacts of Exceeded Criteria Pollutant Emissions. The significant and unavoidable impact with respect to NOx emissions is due largely to vehicle trips. NOx is a "criteria" pollutant, a pollutant that is regulated by the USEPA pursuant to the federal Clean Air Act. The potential health impacts of criteria pollutants are analyzed on a regional level, not on a facility/project level. The SCAQMD and the San Joaquin Valley Unified Air Pollution Control District (SJVAPD), experts in the area of air quality, both recognize that a meaningful, accurate analysis of potential health impacts resulting from criteria pollutants is not currently possible and not likely to yield substantive information that promotes informed decision making. The SJVAPD, in its amicus curiae brief for the recent California Supreme Court decision in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, explained that "it is not feasible to conduct a [health impact analysis] for criteria air pollutants because currently available computer modeling tools are not equipped for this task." The SJVAPD described a project-specific health impact analysis as "not practicable and not likely to yield valid information" because "currently available modeling tools are not well suited for this task." The SJVAPD further noted that "…the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional" cumulative impacts.

It should also be noted that CO, NOx, and VOC are "precursor" pollutants, which makes analysis of potential health impacts even more difficult. CO, NOx, and VOC are precursors to ozone, which is formed in the atmosphere from the chemical reaction of CO, NOx, and VOC in the presence of sunlight. As explained by the SCAQMD in its amicus curiae brief for *Sierra Club v. County of Fresno*, it takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources." Given this, "…it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region." Therefore, SCAQMD opined that while it "may be feasible" for large, regional projects with very high emissions of CO, NOx, and VOC to conduct an accurate health impact analysis, SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by CO, NOx, or VOC emissions from relatively small projects.

Thus, the difficulties with preparing potential health impact analysis related to the Modified Project's CO, NOx, and VOC emissions are twofold. First, current modeling is not capable of correlating emissions of criteria pollutants to concentrations that can be reasonably linked to specific health impacts. Second, CO, NOx, and VOC are precursor emissions and concentrations of CO, NOx, and VOC are impacted by regional atmospheric conditions. CO, NOx, and VOC emitted by the Modified Project may, depending upon interactions with the sun and other emissions, convert to ozone by complex chemical processes. Thus, there is

a significant level of unpredictability associated with such conversion to ozone, as noted by the SCAQMD and the SJVAPD. It should also be noted that this Draft Supplemental EIR does identify health concerns related to CO and NOx emissions. Table 5.1-1 includes a list of criteria pollutants and summarizes common sources and effects. Thus, this Draft SEIR's analysis is reasonable and intended to foster informed decision making.

IMPACT AQ-3: THE MODIFIED PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.

Localized Construction Emissions

Significant and Unavoidable Impact.

As described previously, the daily construction emissions generated onsite by can be evaluated against SCAQMD's LSTs to determine whether the emissions would cause or contribute to adverse localized air quality impacts. The nearest offsite sensitive receptor to the potential area of construction for new residences is approximately 140 feet (43 meters) away. The SCAQMD LST methodology provides thresholds for projects with boundaries located 25, 50, 100, 200, and 500 meters away and projects disturbing 1-, 2-, and 5-acres in size.

Buildout of the residences included in the proposed TLSP Amendment is anticipated to occur over a period of approximately 20 years and would comprise smaller development projects with their own construction time frames and construction equipment. Concentrations of criteria air pollutants generated by construction activities depend on the emissions generated onsite and the distance to the nearest sensitive receptor. Consistent with the existing buildout of the TLSP, the buildout of the proposed TLSP Amendment, could result in construction adjacent to sensitive receptors. Thus, the Modified Project has the potential to expose sensitive receptors to substantial pollutant concentrations. Therefore, a conservative analysis has been included of typical construction activities of a 5-acre project site at the SCAQMD minimum threshold distance of 25 meters. As detailed in Table 5.1-8, the LST emissions within this construction scenario would not exceed the SCAQMD thresholds, and impacts would be anticipated to be less than significant within 50 feet of a sensitive receptor.

Table 5.1-8: Summary of Unmitigated Localized Construction Emissions

Source	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Project Construction Emissions	19.4	35.3	7.8	4.0
Localized Significance Threshold	183.0	1,253.0	13.0	7.0
Exceeds Threshold?	**No**	**No**	**No**	**No**

Notes: CO = carbon monoxide, lbs/day = pounds per day, NOx = nitrogen oxides, $PM_{2.5}$ = particulate matter less than 2.5 microns in size, PM_{10} = particulate matter less than 10 microns in size.
Source: Air Quality, Energy, and Greenhouse Gas Impact Analysis, Appendix B.

Additionally, construction equipment exhaust and fugitive particulate matter emissions would be required to comply with all applicable SCAQMD rules that would be ensured through construction permitting process. However, due to the unknown locations and specific construction activities that would occur for each project that would occur pursuant to the proposed TLSP Amendment, localized construction emissions have the potential to expose sensitive receptors to substantial concentrations of criteria air pollutant emissions and result in a significant impact. Consistent with the findings of the 2017 SEIR, Mitigation Measure AQ-6 would be implemented for each development project to require a construction specific assessment of potential project-related localized quality impacts and implementation of feasible mitigation measures to reduce emissions.

However, because the future locations and potential concentrations of construction emissions are unknown, and the Modified Project would implement infill development of residential units within residential areas, potential significant LST construction emissions could occur that may be significant and unavoidable, which is consistent with the findings of the 2017 SEIR. Therefore, no new significant impacts would occur.

CO Hotspots

Less than Significant Impact. An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. Ambient CO levels monitored at the Anaheim-Pampas Lane monitoring station (SRA 17), the closest station to the TLSP area, showed a highest recorded 1-hour concentration of 2.4 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 1.7 ppm (the State standard is 9 ppm) during the past 3 years (Table 5.1-2). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

In 2003, the SCAQMD estimated that a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a CO hot spot.

Buildout from the existing TLSP would generate approximately 100,611 ADT, including 5,118 AM peak hour trips and 338 PM peak hour trips while buildout associated with the proposed TLSPA Amendment would generate approximately 116,289 ADT, including 8,370 AM peak hour trips and 11,123 PM peak hour trips. As such, the Modified Project would result in an increase in 15,678 ADT, including 3,251 AM peak hour trips and 1,777 PM peak hour trips (Appendix D). These AM and PM peak hour increases in traffic would be distributed amongst various intersections would be far below the 24,000 vehicles per hour that have the potential to cause a CO hot spot. In addition, given the extremely low level of CO concentrations in the City, project-related vehicles are not expected to contribute significantly or result in the CO concentrations exceeding the State or federal CO standards. Thus, impacts would be less than significant, which is consistent with the 2017 SEIR findings.

Friant Ranch Case

In December 2018, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, California Supreme Court held that an EIR's air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided. As noted in the *Brief* of Amicus Curiae by the SCAQMD in the Friant Ranch case (April 6, 2015, Appendix 10.1), SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, and thus it is uniquely situated to express an opinion on how lead agencies should correlate air quality impacts with specific health outcomes.

The SCAQMD discusses that it may be infeasible to quantify health risks caused by projects similar to the Modified Project, due to many factors. It is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). The *Brief* states that it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk - it does not necessarily mean anyone will contract cancer as a result of the Modified Project. The *Brief* also cites the author of the CARB methodology, which reported that a $PM_{2.5}$ methodology is not suited for small projects and may yield unreliable results. Similarly, SCAQMD staff does not currently know of a way to accurately quantify O_3-related health impacts caused by NO_X or VOC emissions from relatively small projects, due to photochemistry and regional model limitations. The *Brief* concludes, with respect to the Friant Ranch EIR, that

although it may have been technically possible to plug the data into a methodology, the results would not have been reliable or meaningful.

On the other hand, for extremely large regional projects (unlike the Modified Project), the SCAQMD states that it has been able to correlate potential health outcomes for very large emissions sources – as part of their rulemaking activity, specifically 6,620 lbs/day of NO_X and 89,180 lbs/day of VOC were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to O_3.

The Modified Project does not generate anywhere near 6,620 lbs/day of NO_X or 89,190 lbs/day of VOC emissions. As shown previously on Table 5.1-6, the peak operational emissions from buildout of the proposed TLSPA Amendment would generate 314.5 lbs/day of NO_X (4.8 percent of 6,620 lbs/day). The VOC emissions would be a maximum of 612.3 lbs/day of during operations (0.7 percent of 89,190 lbs/day). Therefore, the emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a Basin-wide level.

IMPACT AQ-4: THE MODIFIED PROJECT WOULD NOT RESULT IN OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS) ADVERSELY AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE.

Less Than Significant Impact. The Modified Project would not emit other emissions, such as those generating objectionable odors, that would affect a substantial number of people. The threshold for odor is identified by SCAQMD Rule 402, Nuisance, which states:

> *A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.*

The type of facilities that are considered to result in other emissions, such as objectionable odors, include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities.

The Modified Project would provide for infill development of residential units and related open space/recreation areas. Residential land uses do not involve the types of uses that would emit objectionable odors affecting a substantial number of people. In addition, odors generated by non-residential land uses that could be near the Modified Project area are required to be in compliance with SCAQMD Rule 402, which would prevent nuisance odors.

During construction, emissions from construction equipment, architectural coatings, and paving activities may generate odors. However, these odors would be temporary, intermittent in nature, limited to the City's allowable construction hours, and would not affect a substantial number of people. Any odors would be confined to the immediate vicinity of the construction equipment. Also, the short-term construction-related odors would cease upon the drying or hardening of the odor-producing materials.

In addition, all Project-generated solid waste would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations and would not generate objectionable odors. Therefore, impacts associated with other operation- and construction-generated emissions, such as odors, would be less than significant.

5.1.7 CUMULATIVE IMPACTS

As described previously, per SCAQMD's methodology, if an individual project would result in air emissions of criteria pollutants that exceeds the SCAQMD's thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants.

As described in Impact AQ-2 above, emissions from operational activities would result in exceedance of regional thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. The large majority of operational-source NOx emissions (by weight) would be generated by vehicle emissions that neither Project applicants nor the City have the ability to reduce. The majority of the Modified Project's VOC emission exceedances are from use of consumer products that the City cannot control emissions of; and therefore, cannot feasibly be reduced below the SCAQMD thresholds. As a result, NOx and VOC emissions from implementation of the Modified Project would be cumulatively considerable, and cumulative air quality impacts would be significant and unavoidable, which is consistent with the findings of the 2017 SEIR.

5.1.8 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

Plans, Program and Policies

The following Plans, Programs, and Policies (PPP) related to air quality are incorporated into the Modified Project and would reduce impacts related to air quality.

PPP AQ-1: Rule 403. The following measures shall be incorporated into construction plans and specifications as implementation of Rule 403:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Modified Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

PPP AQ-2: Rule 1113. The following measure shall be incorporated into construction plans and specifications as implementation of Rule 1113. The Modified Project shall only use "Low-Volatile Organic Compounds (VOC)" paints (no more than 50 gram/liter of VOC) consistent with SCAQMD Rule 1113.

PPP AQ-3: Rule 445. The following measure shall be incorporated into construction plans and specifications as implementation of Rule 445. Wood burning stoves and fireplaces shall not be included or used in the new development.

PPP AQ-4: CALGreen Building Standards MERV 13 Filters. Indoor air quality within mechanically ventilated buildings shall comply with Section 5.504.5.3 (Filters) of the California Green Building Standards Code Part 11 that requires utilization of at least a Minimum Efficiency Reporting Value (MERV) of 13 air filtration systems. The Code requires MERV 13 filters to be installed prior to occupancy and replaced and/or maintained as directed by the manufacturer.

5.1.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts AQ-1, AQ-2, and AQ-3 would be potentially significant.

Upon implementation of regulatory requirements Impact AQ-4 would be less than significant.

5.1.10 MITIGATION MEASURES

2017 SEIR Mitigation Measures Applicable to the Modified Project

2017 SEIR MM AQ-2: Prior to issuance of grading permits, the Modified Project applicant shall use low VOC architectural coatings for all interior and exterior painting operations.

2017 SEIR MM AQ-3: Prior to the issuance of development permits for new non-residential projects with 100 or more employees, and expanded projects where additional square footage would result in a total of 100 or more employees, the City of Tustin and the City of Irvine, as applicable, shall impose a mix of TDM measures which, upon estimation, would result in an average vehicle ridership of at least 1.5, for each development with characteristics that would be reasonably conducive to successful implementation of such TDM measures. These TDM measures may include one or more of the following, as determined appropriate and feasible by each city on a case-by-case basis:

- Establish preferential parking for carpool vehicles.
- Provide bicycle parking facilities.
- Provide shower and locker facilities.
- Provide carpool and vanpool loading areas.
- Incorporate bus stop improvements into facility design.
- Implement shuttles to shopping, eating, recreation, and/or parking and transit facilities.
- Construct remote parking facilities.
- Provide pedestrian circulation linkages.
- Construct pedestrian grade separations.
- Establish carpool and vanpool programs.
- Provide cash allowances, passes, and other public transit and purchase incentives.
- Establish parking fees for single occupancy vehicles.
- Provide parking subsidies for rideshare vehicles.
- Institute a computerized commuter rideshare matching system.
- Provide a guaranteed ride-home program for ridesharing.
- Establish alternative work week, flex-time, and compressed work week schedules.
- Establish telecommuting or work-at-home programs. Provide additional vacation and compensatory leave incentives.
- Provide on-site lunch rooms/cafeterias and commercial service such as banks, restaurants, and small retail.
- Provide on-site day care facilities.
- Establish an employee transportation coordinator(s).

2017 SEIR MM AQ-4: If not required under each individual development's TDM plan, the City of Tustin and the City of Irvine, as applicable, shall implement the following measures, as determined appropriate or feasible by each city on a case-by-case basis:

- Reschedule truck deliveries and pickups for off peak hours.
- Implement lunch shuttle service from a worksite(s) to food establishments.
- Implement compressed work week schedules where weekly work hours are compressed into fewer than five days, such as 9/80, 4/40, or 3/36.
- Provide on site child care and after school facilities or contribute to off site developments within walking distance.
- Provide on site employee services such as cafeterias, banks, etc.
- Implement a pricing structure for single occupancy employee parking, and/or provide discounts to ride sharers.
- Construct off site pedestrian facility improvements such as overpasses and wider sidewalks.
- Include retail services within or adjacent to residential subdivisions.
- Provide shuttles to major rail transit centers or multi modal stations.
- Contribute to regional transit systems (e.g., right of way, capital improvements, etc.).
- Synchronize traffic lights on streets impacted by development.
- Construct, contribute, or dedicate land for the provision of off site bicycle trails linking the facility to designated bicycle commuting routes.
- Include residential units within a commercial development.
- Provide off site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on site improvements, such as bicycle paths.
- Include bicycle parking facilities such as bicycle lockers.
- Include showers for bicycling and pedestrian employees' use.
- Construct on site pedestrian facility improvements, such as building access, which is physically separated from street and parking lot traffic, and walk paths.

2017 SEIR MM AQ-5: Applicants for new development projects within the Tustin Legacy Specific Plan shall require the construction contractor to use equipment that meets the US Environmental Protection Agency (EPA) Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities, unless it can be demonstrated to the City of Tustin that such equipment is not available.

Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what would be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine, as defined by the California Air Resources Board's regulations.

Prior to construction, the Modified Project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 4 or higher emissions standards for construction equipment with more than 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the site for the verification of the City of Tustin. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board Rule 2449.

2017 SEIR MM AQ-6: Prior to the issuance of grading permits, the applicants for individual new developments shall evaluate localized construction-related air quality impacts. Localized construction emissions shall be evaluated to the South Coast Air Quality Management District's Localized Significance Thresholds for construction. Applicable mitigation measures to reduce potential localized construction-related air quality impacts shall be included in the evaluation, as necessary, to minimize impacts to the extent feasible and shall be implemented. The evaluation shall be submitted to the City of Tustin for review. In addition, all

recommended mitigation measures shall be noted on all construction plans submitted to the City of Tustin Building and Public Works Department for verification.

Proposed Specific Plan Amendment Project Mitigation Measures

Mitigation Measure AQ-1: Vehicle Trip Reduction. Rental Units: The Modified Project Applicant of for-rent residential developments shall notify and offer to the tenant or prospective tenant, materials describing public transit, ridesharing, and nonmotorized commuting opportunities in the vicinity of the development. The materials shall be approved by the City of Tustin. The materials shall be provided no later than the time the rental agreement is executed. A program outlining the implementation of this measure shall be submitted to the City of Tustin Planning Division for review and approval, prior to the issuance of the first certificate of occupancy.

Mitigation Measure AQ-2: Prohibition of Fireplaces. The installation of wood-burning and natural gas devices shall be prohibited inside residential dwelling units. The purpose of this measure is to limit emissions of ROG, NO_X, and particulate matter emissions from wood-burning and natural gas devices used for primary heat, supplemental heat, or ambiance. This prohibition shall be noted on the deed and/or any tenant lease agreements.

Mitigation Measure AQ-3: Electric Landscape Equipment. Prior to the issuance of occupancy permits, the Community Development Department shall confirm that the Modified Project's Codes Covenants and Restrictions (CC&Rs) and/or tenant lease agreements include contractual language that all landscaping equipment used on site shall be 100 percent electrically powered. All residential and non-residential properties shall be equipped with exterior electrical outlets to accommodate this requirement. This requirement shall be included in the third-party vendor agreements for landscape services for the building owner and tenants, as applicable.

Mitigation Measure AQ-4: Low VOC Paint (Operations). The Modified Project Applicant shall require by contract specifications for commercial development to use interior and exterior architectural coatings (paint and primer including parking lot paint) products that have a volatile organic compound rating of 10 grams per liter or less. Contract specifications shall be reviewed and approved by the City of Tustin prior to the issuance of building permits. This measure shall be made a condition of approval for continued upkeep of the property.

5.1.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Emissions from operation of the proposed TLSP Amendment would exceed SCAQMD's thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$, which is consistent with the threshold exceedances that would occur from buildout of the existing TLSP. Due to the increase in vehicle trips and localized emissions from the increase in residences proposed by the Modified Project, the exceedance of the thresholds would be exacerbated compared to buildout of the existing TLSP. The majority of NOx emissions are from vehicles and the majority of VOC emissions would be derived from consumer products, neither of which the City has the ability to reduce emissions of. Therefore, VOC, NOx, CO, PM_{10}, and $PM_{2.5}$ emissions from implementation of the Modified Project would result in both a project level and a cumulatively considerable significant and unavoidable impact. Hence, Impacts AQ-1 and AQ-2 would be significant and unavoidable after mitigation, which is consistent with the findings of the 2017 SEIR.

Impact AQ-3 Consistent with the existing buildout of the TLSP, the buildout of the proposed TLSP Amendment, could result in construction adjacent to sensitive receptors and has the potential to expose sensitive receptors to substantial pollutant concentrations. Construction equipment exhaust and fugitive particulate matter emissions would be required to comply with all applicable SCAQMD rules that would be ensured through

construction permitting process. However, localized construction emissions have the potential to expose sensitive receptors to substantial concentrations of criteria air pollutant emissions and result in a significant and unavoidable impact. This is consistent with the findings of the 2017 SEIR. Therefore, no new significant impacts would occur.

5.1.12 REFERENCES

City of Tustin. (2018, November). *City of Tustin General Plan*. Retrieved from https://www.tustinca.org/DocumentCenter/View/713/City-of-Tustin-General-Plan-PDF

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LSA Associates. (2024). *Air Quality, Energy, and Greenhouse Gas Impact Report*.

PlaceWorks. (2017, June). *Tustin Legacy Specific Plan Amendment Supplemental Environmental Impact Report*. Retrieved from City of Tustin Specific Plans: https://www.tustinca.org/400/Specific-Plans

5.2 Energy

5.2.1 INTRODUCTION

This section of the Draft Supplemental Environmental Impact Report (DSEIR) assesses the significance of the use of energy, including electricity, natural gas and gasoline, and diesel fuels, that would result from implementation of the proposed TLSP Amendment Project. It discusses existing energy use patterns and examines whether the proposed Project (including development and operation) would result in the consumption of large amounts of fuel or energy or use such resources in a wasteful manner.

Refer to Section 5.3, *Greenhouse Gas Emissions*, for a discussion of the relationship between energy consumption and greenhouse gas (GHG) emissions, and Section 5.10, *Utilities and Service Systems*, for a discussion of water consumption. This section includes data from:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Tustin Legacy Specific Plan Amendment*, as Amended in 2017
- *Tustin Legacy Specific Plan Amendment SEIR*
- Tustin City Code
- *Tustin Legacy Specific Plan Amendment Project Air Quality, Energy, and Greenhouse Gas Impact Report*, prepared by LSA, May 2024 (Appendix B)

5.2.2 REGULATORY SETTING

5.2.2.1 State Regulations

Energy Independence and Security Act, Corporate Average Fuel Efficiency Standards

In response to *Massachusetts et al. vs. Environmental Protection Agency et al.*, the Bush Administration issued an executive order on May 14, 2007, directing the U.S. Environmental Protection Agency and the Department of Transportation to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law, requiring an increased Corporate Average Fuel Economy (CAFE) standard of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by the 2020 model year.

In addition to setting increased CAFE standards for motor vehicles, the Energy Independence and Security Act includes the following additional provisions:

- Renewable Fuel Standard (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

Additional provisions of the Act address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.

California Code of Regulations (CCR) Title 13, Motor Vehicles, Section 2449(d)(3)

No vehicle or engines subject to this regulation may idle for more than 5 consecutive minutes. The idling limit does not apply to:

- Idling when queuing,
- Idling to verify that the vehicle is in safe operating condition,
- Idling for testing, servicing, repairing, or diagnostic purposes,
- Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane),
- Idling required to bring the machine system to operating temperature, and
- Idling necessary to ensure safe operation of the vehicle.

California Public Utilities Commission Plans and Programs

The California Public Utilities Commission (CPUC) has authority to set electric rates, regulate natural gas utility service, protect consumers, promote energy efficiency, and ensure electric system reliability. The CPUC has established rules for the planning and construction of new transmission facilities, distribution facilities, and substations. Utility companies are required to obtain permits to construct certain power line facilities or substations. The CPUC also has jurisdiction over the siting of natural gas transmission lines.

The CPUC regulates distributed energy generation policies and programs for both customers and utilities. This includes incentive programs (e.g., California Solar Initiative) and net energy metering policies. Net energy metering allows customers to receive a financial credit for power generated by their onsite system and fed back to the utility. The CPUC is involved with utilities through a variety of energy procurement programs, including the Renewable Portfolio Standard program.

In 2008, the CPUC adopted the Long-Term Energy Efficiency Strategic Plan, which is a road map to achieving maximum energy savings in California through 2020. Consistent with California's energy policy and electricity "loading order," the Energy Efficiency Strategic Plan indicates that energy efficiency is the highest priority resource in meeting California's energy needs. The CPUC also adopted energy goals that require all new residential construction in California to be zero net energy by 2020. The zero-net energy goal means new buildings must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy need. In addition to the zero net energy goals for residential buildings by 2020, the CPUC has adopted goals that all new commercial construction in California will be zero net energy by 2030, and 50 percent of existing commercial buildings will be retrofit to zero net energy by 2030.

Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 33 percent to 50 percent by December 31, 2030, thereby doubling energy efficiency within the State. SB 350 makes revisions to the California Renewable Portfolio Standards (RPS) Program and to certain other requirements on public utilities and publicly owned electric utilities. SB 350 also requires local publicly-owned electric utilities to establish annual targets for energy efficiency savings and demand reduction consistent with a statewide goal established by the CPUC and provides incentives for electrification of rail facilities. Local utilities would be required to develop more detailed strategies and incentives for use of renewable energy sources, resulting in an increased demand for renewable energy generation.

SB 350 emphasizes the important role of electric vehicles in California's overall scheme to combat climate change, declaring that "[d]eploying electric vehicles should assist in grid management, integrating generation

from eligible renewable energy resources, and reducing fuel costs for vehicle drivers." The bill promotes the development of additional electric vehicle charging infrastructure to encourage greater use of electric cars and requires electrical utilities to include expansion of electrical vehicle charging facilities as part of their strategies and incentives for reducing overall energy consumption.

Assembly Bill 1007 (Pavley, Chapter 371, Statutes of 2005)

Assembly Bill 1007 required the California Energy Commission (CEC) to prepare a state plan (State Alternative Fuels Plan) to increase the use of alternative fuels in California. The Commission prepared the State Alternative Fuels Plan in partnership with the California Air Resources Board and in consultation with other state, federal, and local agencies. The final State Alternative Fuels Plan, published in December 2007, attempts to achieve an 80 percent reduction in greenhouse gas emissions associated with personal transportation, even as California's population increases. Measures proposed that would reduce petroleum fuel use include:

1. Lowering the energy needed for personal transportation by tripling the energy efficiency of on-road vehicles by 2050 through:
    a. Conventional gas, diesel, and flexible fuel vehicles (FFVs) averaging more than 40 miles per gallon (mpg).
    b. Hybrid gas, diesel, and FFVs averaging almost 60 mpg.
    c. All electric and plug-in hybrid electric vehicles (PHEVs) averaging well over 100 mpg (on a greenhouse gas equivalents [GGE] basis) on the electricity cycle.
    d. Fuel cell vehicles averaging over 80 mpg (on a GGE basis).
2. Moderating growth in per capita driving, reducing today's average per capita driving miles by about 5 percent or back to 1990 levels.
3. Changing the energy sources for transportation fuels from the current 96 percent petroleum-based to approximately:
    a. 30 percent from gasoline and diesel from traditional petroleum sources or lower GHG emission fossil fuels such as natural gas.
    b. 30 percent from transportation biofuels.
    c. 40 percent from a mix of electricity and hydrogen.
4. Producing transportation biofuels, electricity, and hydrogen from renewable or very low carbon-emitting technologies that result in, on average, at least 80 percent lower life cycle GHG emissions than conventional fuels.
5. Encouraging more efficient land uses and greater use of mass transit, public transportation, and other means of moving goods and people.

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CALGreen) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 update that is applicable to building permit applications submitted after January 1, 2023. The updated 2022 standards focus on the following:

- Encouraging electric heat pump technology and use. Heat pumps use less energy and produce fewer emissions than traditional HVACs and water heaters.

- Establishing electric-ready requirements when natural gas is installed to provide for electric heating, cooking, and electric vehicle (EV) charging.
- Expanding solar photovoltaic (PV) system and battery storage standards.
- Strengthening ventilation standards to improve indoor air quality.

In addition to these updated standards, the CALGreen standards that are applicable to the proposed Project include, but are not limited to, the following:

- Short-term bicycle parking. Provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.
- Designated parking for clean air vehicles. Provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Title 24 Part 6 Table 5.106.5.2.
- Electric vehicle charging stations. Facilitate the future installation of electric vehicle supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight, and glare ratings per Title 24 Part 6 Table 5.106.8.
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste.
- Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals.
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush.
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush.
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute. Metering faucets shall not deliver more than 0.20 gallons per cycle. Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle.
- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent.
- Water meters. Separate submeters or metering devices shall be installed for new buildings or where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day.

- Outdoor water use in rehabilitated landscape projects equal or greater than 2,500 SF. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF requiring a building or landscape permit.
- Commissioning. For new buildings 10,000 SF and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements.

The 2022 CALGreen Building Standards Code has been adopted by the City of Tustin by reference in Municipal Code Section 8100.

5.2.2.2 Local Regulations

City of Tustin General Plan

The City of Tustin policies related to energy are provided in the Conservation, Open Space, and Recreation Element of the General Plan. The following energy use related policies are applicable to the proposed Project:

Goal 1 **Reduce air pollution through proper land use, transportation and energy planning.**

Policy 1.3 Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.7 Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.

Goal 2 **Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.**

Policy 2.1 Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2 Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.6 Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.

Goal 4 **Reduce emissions through reduced energy consumption.**

Policy 4.1 Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

Policy 4.2 Promote local recycling of waste and the use of recycled materials.

Tustin City Code

Tustin City Code Section 8100 incorporates the California Energy Code and the California Green Building Standards Code by reference.

5.2.3 ENVIRONMENTAL SETTING

5.2.3.1 Electricity

The Southern California Edison Company (SCE) is the electrical purveyor in the City of Tustin. SCE provides electricity service to more than 15 million people in a 50,000 square-mile area of central, coastal and Southern California. California utilities are experiencing increasing demands that require modernization of the electric distribution grid to, among other things, accommodate two-way flows of electricity and increase the grid's capacity. SCE is in the process of implementing infrastructure upgrades to ensure the ability to meet future demands. In addition, as described by the Edison International 2022 Annual Report, the SCE electrical grid modernization effort supports implementation of California requirements to achieve carbon neutrality by 2045. The state has set Renewables Portfolio Standards that require retail sellers of electricity to provide 60 percent of power from renewable resources by 2030. The state also requires sellers of electricity to deliver 100 percent of retail sales from carbon-free sources by 2045, including interim targets of 90 percent by 2035 and 95 percent by 2040. In 2022 approximately 49 percent of power that SCE delivered to customers came from carbon-free resources (SCE, 2023).

According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2022 was 85,870 GWh (31,604 GWh for the residential sector and 54,266 GWh for the non-residential sector). Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kilowatt hours [kWh]), including 7,830 GWh for the residential sector and 12,414 GWh for the non-residential sector.

The TLSP area is currently served by the electricity distribution system that exists along the roadways within and adjacent to the area.

5.2.3.2 Natural Gas

The Southern California Gas Company (SoCalGas) is the natural gas purveyor in the City of Tustin and is the principal distributor of natural gas in Southern California. SoCalGas provides natural gas to approximately 21.8 million people in a 24,000 square mile service area throughout Central and Southern California. The gas supply available to SoCalGas is regionally diverse and includes supplies from California sources (onshore and offshore), Southwestern U.S. supply sources, the Rocky Mountains, and Canada (CGEU, 2023). SoCalGas designs its facilities and supplies to provide continuous service during extreme peak demands and has identified the ability to meet peak demands through 2035 (CGEU, 2023).

According to the CEC, total natural gas consumption in the SoCalGas service area in 2022 was 5,026 million therms (2,230 million therms for the residential sector). Total natural gas consumption in Orange County in 2021 was 573 million therms (572,454,744 therms), including 352 million therms for the residential sector and 221 million therms for the non-residential sector (California Energy Commission , 2023).

The TLSP area is currently served by the natural gas distribution system that exists within the roadways within and adjacent to the area.

5.2.3.3 Fuel

The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.9 mpg in 2021 (U.S. Department of Transportation, 2024). Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. This act, which originally mandated a national fuel economy standard of 35 mpg by year 2020, applies to cars and light trucks of Model Years 2011 through

2020 (U.S. Department of Energy, 2007). In March 2020, the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks, further detailed below.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, in 2021, total gasoline consumption in California was 289,918 thousand barrels (12.2 billion gallons) or 1,464.7 trillion British Thermal Units (BTU). Of the total gasoline consumption, 273,289 thousand barrels (11.5 billion gallons) or 1,380.7 trillion BTU were consumed for transportation (U.S. Energy Information Administration, 2022). Based on fuel consumption obtained from CARB's California Emissions Factor Model, Version 2021 (EMFAC2021), approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024.

5.2.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines indicates that a project could have a significant effect if it were to:

E-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

E-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.2.5 METHODOLOGY

A number of factors are considered when weighing whether a project would use a proportionately large amount of energy or whether the use of energy would be wasteful in comparison to other projects. Factors such as the use of onsite renewable energy features, energy conservation features or programs, and relative use of transit are considered.

According to Appendix F of the CEQA Guidelines, conserving energy is defined as decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. Neither Appendix F of the CEQA Guidelines nor Public Resources Code Section 21100(b)(3) offer a numerical threshold of significance that might be used to evaluate the potential significance of energy consumption of a project. Rather, the emphasis is on reducing "the wasteful, inefficient, and unnecessary consumption of energy."

Construction activities would result in wasteful, inefficient, or unnecessary use of energy if, for example, construction equipment is old or not well maintained, if equipment is left to idle when not in use, if travel routes are not planned to minimize vehicle miles traveled, or if excess lighting or water is used during construction activities. Energy usage during project operation would be considered "wasteful, inefficient, and unnecessary" if the project were to violate federal, state, and/or local energy standards, including Title 24 of the California Code of Regulations, inhibit pedestrian or bicycle mobility, inhibit access to transit, or inhibit feasible opportunities to use alternative energy sources, such as solar energy, or otherwise inhibit the conservation of energy.

5.2.6 ENVIRONMENTAL IMPACTS

Summary of Impacts Previously Identified

Energy was not analyzed by previous CEQA documentation.

Proposed TLSP Amendment Project

IMPACT E-1: THE PROJECT WOULD NOT RESULT IN A POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES, DURING PROJECT CONSTRUCTION OR OPERATION.

Less than Significant Impact.

Construction

During the construction phases of the proposed Project energy would be consumed in 3 general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the Project site, construction worker travel to and from the Project site, as well as delivery truck trips;
2. Electricity associated with providing temporary power for lighting and electric equipment; and
3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Construction activities related to new projects pursuant to the proposed TLSP Amendment would not result in inefficient or wasteful use of fuel. Construction would occur pursuant to the City's allowable construction hours, pursuant to City permitting. The demand for construction-related electricity and fuels would be limited to those time frames and would vary based on construction activities for each development project, which would be reviewed by City staff during the typical development review and permitting process.

Truck idling is regulated by CCR Title 13, Motor Vehicles, Section 2449(d)(3) Idling, that limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Additionally, construction contractors are required to demonstrate compliance with applicable California Air Resources Board (CARB) regulations governing the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment during the City's construction permitting process. Compliance with existing CARB idling restrictions and the use of newer engines and equipment would reduce fuel combustion and energy consumption.

As indicated in Table 5.2-1, buildout of the proposed TLSP Amendment would consume approximately 722,247.3 gallons of diesel fuel per year and approximately 1,797,763.8 gallons of gasoline per year during construction, which is an increase of 158,694.6 gallons of diesel fuel per year and approximately 828,461.5 gallons of gasoline per year over buildout of the existing TLSP.

Table 5.2-1: Estimated Construction Energy Usage

Energy Type	Total Energy Consumption	Annual Energy Consumption
Approved Project		
Approved Project Diesel Fuel (total gallons)	11,271,055.1	563,552.8
Approved Project Gasoline (total gallons)	19,386,047.1	969,302.4
Proposed Modified Project		
Modified Project Diesel Fuel (total gallons)	14,444,946.8	722,247.3
Modified Project Gasoline (total gallons)	35,955,276.2	1,797,763.8
Increase in Energy Usage (Proposed Modified Project – Approved Project)		
Increase in Diesel Fuel (total gallons)	3,173,891.7	158,694.6
Increase in Gasoline (total gallons)	16,569,229.1	828,461.5

Note: The annual energy consumption was calculated by averaging the total energy consumption over the 20-year buildout period.

Source: *Air Quality, Energy, and Greenhouse Gas Impact Analysis* (Appendix B)

Based on fuel consumption obtained from the EMFAC2021 model, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, the energy usage associated with buildout of the proposed TLSP Amendment would increase the annual construction fuel use in Orange County by approximately 0.5 percent for diesel fuel usage and by 0.1 percent for gasoline fuel. As such, project construction would have a minimal effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Orange County's overall use of the State's available energy resources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. Construction activities would comply with all applicable regulations, as required through the City's development permitting process, and would not use large amounts of energy or fuel in a wasteful, inefficient, or unnecessary manner. Thus, impacts related to construction energy usage would be less than significant.

Operation

Once operational, the residential uses included in the proposed TLSP Amendment would generate demand for electricity, natural gas, as well as gasoline for motor vehicle trips. Operational use of energy includes the heating, cooling, and lighting of building areas, water heating, operation of electrical systems and appliances, parking lot and outdoor lighting, and the transport of electricity, natural gas, and water to the areas where they would be consumed. This use of energy is typical for urban development, and no operational activities or land uses would occur that would result in extraordinary energy consumption.

Fuel Demand

Buildout of the proposed TLSP Amendment would result in an increase of 15,678 daily vehicle trips that would generate an increased use of fuel (Appendix D). As detailed in Table 5.2-2, this increase in fuel is estimated to be 9,171,101.1 gallons of gasoline and 965,303.8 gallons of diesel fuel per year, which is an increase of 6,665,377 gallons of gasoline and 701,564 gallons of diesel fuel per year over buildout of the existing TLSP.

Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, vehicle trips associated with the buildout of the proposed TLSP Amendment would increase the annual fuel use in Orange County by approximately 0.8 percent for gasoline and approximately 0.6 percent for diesel. Fuel consumption associated with vehicle trips generated by the proposed TLSP Amendment would not be inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Table 5.2-2: Estimated Operational Energy Usage at Buildout

Energy Type	Annual Energy Consumption
Approved Project	
Electricity Consumption (kWh/year)	45,612,144
Natural Gas Consumption (therms/year)	867,801
Gasoline (gallons/year)	2,505,724.1
Diesel Fuel (gallons/year)	263,739.9
Proposed Modified Project	
Electricity Consumption (kWh/year)	82,337,291

Natural Gas Consumption (therms/year)	1,946,109
Gasoline (gallons/year)	9,171,101.1
Diesel Fuel (gallons/year)	965,303.8
Increase in Energy Usage (Proposed Modified Project – Approved Project)	
Electricity Consumption (kWh/year)	36,725,147
Natural Gas Consumption (therms/year)	1,078,308
Gasoline (gallons/year)	6,665,377
Diesel Fuel (gallons/year)	701,564

Source: *Air Quality, Energy, and Greenhouse Gas Impact Analysis* (Appendix B)

Electricity Demand

As shown in Table 5.2-2, the estimated electricity demand from buildout of the proposed TLSP Amendment is 82,337,291 kWh per year, which is an increase in 36,725,147 kWh per year over buildout of the existing TLSP. Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kWh). Thus, operation of the proposed TLSP Amendment at buildout would increase the annual electricity consumption in Orange County by approximately 0.4 percent.

Natural Gas Demand

Additionally, as shown in Table 5.2-2, the estimated natural gas demand associated with development consistent with the proposed TLSP Amendment is 1,946,109 therms per year, which is an increase in 1,078,308 therms per year over buildout of the existing TLSP. Total natural gas consumption in Orange County in 2022 was 573 million therms (572,454,744 therms). Thus, operation of the proposed TLSP Amendment at buildout would increase the annual natural gas consumption in Orange County by approximately 0.3 percent.

Electrical and natural gas demand associated with future operations would not be considered inefficient, wasteful, or unnecessary because all future development would be required to adhere to all federal, State, and local requirements for energy efficiency, including the latest Title 24 standards that would be verified during the City's development review and permitting procedures. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting, which would ensure that energy usage is not wasteful or inefficient.

Land Use Type and Location Demand

The residential units that would be developed pursuant to the proposed TLSP would consist of urban infill development within an area providing a mix of residential, open space, and commercial (retail/restaurant) uses. The TLSP includes and is located near existing employment, commercial, residential, and retail destinations and existing public bus stops and in proximity to freeways and destination locations, which would result in reduced vehicle trips and efficient use of energy.

The California Air Pollution Control Officers Association (CAPCOA) has a guidance document titled *Quantifying Greenhouse Gas Mitigation Measures* (2010) that identifies land use characteristics of projects that reduce vehicle trip distances and the associated transportation-related energy demand, as described below.

- **Area Density:** CAPCOA identifies that increases in area density, measured in terms of persons, jobs, or dwelling units per unit area, reduces VMT associated with transportation[1], as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies such as enhanced transit services (CAPCOA guidance measure LUT-1). According to CAPCOA, the reduction in VMT from increases in area density applies to urban and suburban settings for residential, retail, office, industrial, and mixed-use projects. The proposed TLSP Amendment would provide additional residential units within an urban area near employment opportunities, services, retail/restaurant, and open space. The proposed TLSP Amendment would provide an increase in area residential density and an improvement to the jobs-housing balance. As detailed in Section 5.6, *Population and Housing*, the Project region has an existing and projected future imbalance between the number of jobs and housing units, and per CAPCOA guidance, the addition of residential units within the area would reduce VMT and the VMT-related fuel demand. Therefore, the proposed TLSP Amendment is consistent with infill development that increases area density as described by CAPCOA. Thus, based on the CAPCOA guidance the proposed Project would not result in wasteful, inefficient, or unnecessary use of fuel, and impacts would be less than significant.
- **Location Efficiency:** Location efficiency describes the location of a project relative to the type of urban landscape such as an urban area, compact infill, or suburban center. CAPCOA guidance measure LUT-2.22 describes that a reduction in VMT and the related use of energy occurs from development within urban areas that include residential, retail, office, industrial, mixed-uses, and transportation access. As described previously, the TLSP is an urban area and the proposed TLSP Amendment would provide for additional residential units near employment, retail, and services that would provide for efficient use of transportation energy. The TLSP location also provides for efficient energy use to access existing freeways (that include I-405, I-5, and SR-55), regionally serving arterial roadways (Barranca Parkway, Red Hill Avenue, Jamboree Road, Edinger Avenue, Warner Avenue), and the OCTA bus lines that run within and adjacent to the TLSP area.

  In addition, the TLSP area contains sidewalks and is within walking and bicycling distance of various existing retail services, such as groceries, restaurants, banks, entertainment, and recreation facilities. According to the CAPCOA guidance, factors that contribute to VMT reductions include pedestrian connectivity between the project site and offsite destinations. The City of Tustin requires new residential development to include installation of sidewalks (and bicycle lanes on specific roadways) that would connect to existing facilities. Both walking and bicycling to nearby destinations would reduce transportation energy use. Thus, the TLSP location provides for efficient use of transportation energy supplies and is consent with policies for reducing VMT.

  In addition, the TLSP area contains and is surrounded by existing infrastructure would provide for efficient delivery of electricity and natural gas to the new development. Furthermore, other existing and future regulations are likely to result in more efficient use of all types of energy, and reduction in reliance on non-renewable sources of energy. These include the Federal Energy Independence and Security Act, the State Long Term Energy Efficiency Strategic Plan, SB 350, and AB 1007 (described above), which are designed to reduce reliance on non-renewable energy resources and reduce demand by providing

[1] CalEEMod, by default, assumes that trip distances in the South Coast Air Basin (Basin) are slightly longer than the statewide average. This is because the commute patterns in the Basin involve a substantial portion of the population commuting relatively far distances, which is documented in the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which shows that in existing and future plan conditions, more than 50 percent of all work trips are 10 miles or longer (SCAG, Performance Measures Appendix, page 13, 2016). Thus, work trips that would be less than 10 miles would assist in meeting the 2016 RTP/SCS goal of reducing overall VMT in the region.

federal tax credits for purchasing fuel-efficient items and improving the renewable fuel, appliance, and lighting standards. Thus, the proposed TLSP Amendment would not result in wasteful, inefficient, or unnecessary use of fuel, and impacts would be less than significant.

IMPACT E-2: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENTY.

No Impact. Proposed development projects pursuant to the proposed TLSP Amendment would be required to meet the CCR Title 24 energy efficiency standards in effect during the permitting process. The City's administration of the CCR Title 24 requirements includes review of design components and energy conservation measures that occurs during the permitting process, which ensures that all requirements are met. In addition, future development pursuant to the proposed TLSP Amendment would not conflict with or obstruct opportunities to use renewable energy, such as solar energy. The proposed TLSP Amendment would not result in obstruction of opportunities for use of renewable energy. New developments would be required to incorporate the use of solar energy, pursuant to the CALGreen requirements. Through the City's development permitting process, new development would be required to comply with most current Title 24 Building Energy Efficiency Standards, which provide minimum efficiency standards related to various building features, including water and space heating and cooling equipment, building insulation and roofing, and lighting. Thus, the proposed TLSP Addendum would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would not occur.

The City's General Plan also includes several policies related to energy. The applicable policies and the proposed TLSP Amendment's consistency are described in Table 5.2-3.

Table 5.2-3: Consistency with General Plan Energy Related Policies

General Plan Policy	Project Consistency
Conservation, Open Space, and Recreation Element	
Policy 1.3 Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.	**Consistent**. The proposed TLSP Addendum would provide for additional multiple family developments close to commercial areas within the TLSP that would encourage pedestrian travel.
Policy 1.7 Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.	**Consistent**. As detailed in Section 5.8, *Transportation*, The TLSP Recreational Bikeway/Trail Concept Plan links to adjacent on- and off-road bikeways/trails as identified in Figure 5.8-2 that would provide biking alternatives for transportation and recreational use. The proposed TLSP Addendum would provide for additional residences close to the bikeways that would implement usage.
Policy 2.1 Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.	**Consistent**. The proposed TLSP Addendum would provide for additional residences close to services, recreation, employment, and retail/restaurant uses that would reduce vehicle trips.
Policy 2.2 Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.	**Consistent**. he proposed TLSP Addendum would provide for additional residences close to services, recreation, employment, and retail/restaurant uses that would reduce vehicle trips.
Policy 2.6 Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.	**Consistent**. As detailed in Section 5.8, *Transportation*, The TLSP Recreational Bikeway/Trail Concept Plan links to adjacent on- and off-road bikeways/trails as identified in Figure 5.8-2 that would provide biking and pedestrian alternatives for transportation. The proposed

General Plan Policy	Project Consistency
	TLSP Addendum would provide for additional residences close to the bikeways and pedestrian pathways that would encourage non-motorized transportation.
Policy 4.1 Promote energy conservation in all sectors of the City including residential, commercial, and industrial.	**Consistent**. Energy conservation would be promoted in all new TLSP development by compliance with existing energy related regulations including Title 24 and CALGreen that would be verified during the development review and permitting process of each project.
Policy 4.2 Promote local recycling of waste and the use of recycled materials.	**Consistent**. Recycling and use of recycled materials would be promoted in all new TLSP development by compliance with existing regulations including Title 24 and CALGreen that would be verified during the development review and permitting process of each project.

Thus, the proposed TLSP Amendment would not interfere with any plan for renewable energy or energy efficiency, and no impacts would occur.

5.2.7 CUMULATIVE IMPACTS

The geographic context for analysis of cumulative impacts regarding energy includes past, present, and future development within Southern California because energy supplies (including electricity, natural gas, and petroleum) are generated and distributed throughout the Southern California region.

All development projects throughout the region would be required to comply with the energy efficiency standards in the Title 24 requirements. Additionally, some of the developments could provide for additional reductions in energy consumption by use of solar panels, sky lights, or other LEED type energy efficiency infrastructure. With implementation of the existing energy conservation regulations, cumulative electricity and natural gas consumption would not be cumulatively wasteful, inefficient, or unnecessary.

Petroleum consumption associated with the residential uses included in the proposed TLSP Amendment would be primarily attributable to transportation, especially vehicular use. However, state fuel efficiency standards and alternative fuels policies (per AB 1007 Pavely) would contribute to a reduction in fuel use, and the Federal Energy Independence and Security Act and the State Long Term Energy Efficiency Strategic Plan would reduce reliance on non-renewable energy resources. For these reasons, the consumption of petroleum would not occur in a wasteful, inefficient, or unnecessary manner and would be less than cumulatively considerable.

5.2.8 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

The following standard regulation would reduce potential impacts related to energy:

- California Energy Code (Code of Regulations, Title 24 Part 6).

5.2.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, Impacts E-1and E-2 would be less than significant.

5.2.10 MITIGATION MEASURES

2017 SEIR Mitigation Measures Applicable to the Proposed Project

None.

Proposed TLSP Amendment Project Mitigation Measures

None.

5.2.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts related to energy would be less than significant.

5.2.12 REFERENCES

California Air Pollution Control Officers Association . (2010, August). *Quantifying Greenhouse Gas Mitigation Measures*. Retrieved from https://www.aqmd.gov/docs/default-source/ceqa/handbook/capcoa-quantifying-greenhouse-gas-mitigation-measures.pdf

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5.3 Greenhouse Gas Emissions

5.3.1 INTRODUCTION

This section evaluates the potential for implementation of the proposed Project to cumulatively contribute to greenhouse gas (GHG) emissions impacts. No single project is large enough to result in a measurable increase in global concentrations of GHG emissions; therefore, impacts of the proposed Project are considered on a cumulative basis. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (SCAQMD). This section also addresses the proposed Project's consistency with applicable plans, policies, and public agency regulations adopted for the purpose of reducing the emissions of GHGs. The analysis within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Tustin Legacy Specific Plan Amendment*, as Amended in 2017
- Tustin City Code
- *Tustin Legacy Specific Plan Amendment Project Air Quality, Energy, and Greenhouse Gas Impact Report,* prepared by LSA, May 2024 (Appendix B)

5.3.2 REGULATORY SETTING

5.3.2.1 Federal Regulations

GHG Endangerment Ruling

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the United States Supreme Court (Supreme Court) found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Supreme Court held that the United States Environmental Protection Agency (USEPA) Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the Supreme Court declined to review an Appeals Court ruling that upheld the USEPA Administrator's findings.

Clean Vehicle Requirements

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the USEPA, and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applied to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) to cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold. The USEPA and the NHTSA issued second-phase national standards for light-duty vehicles for model years 2017 through 2025 to achieve an equivalent to 54.5 mpg.

5.3.2.2 State Regulations

California Assembly Bill 1493 – Pavley

In 2002, the California legislature adopted regulations to reduce GHG emissions in the transportation sector. In September 2004, pursuant to AB 1493, the California Air Resources Board (CARB or Board) approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. In September 2009, CARB adopted amendments to the Pavley regulations to reduce GHG from 2009 to 2016. CARB, the USEPA and the U.S. Department of Transportation's National Highway Traffic and Safety Administration have coordinated efforts to develop fuel economy and GHG standards for model 2017-2025 vehicles. The GHG standards are incorporated into the "Low Emission Vehicle" Regulations.

California Executive Order S-3-05 – Statewide Emission Reduction Targets

Executive Order S-3-05 was established by Governor Arnold Schwarzenegger in June 2005. Executive Order S-3-05 establishes statewide emission reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 1279

Assembly Bill (AB) 1279 requires the state to achieve net zero GHG as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter. The bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels and directs the California Air Resources Board to work with relevant state agencies to achieve these goals.

California Assembly Bill 32 (AB 32), Global Warming Solutions Act of 2006 (Chapter 488, Statutes of 2006)

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)], which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by

the Board in 2008 and must be updated at least every five years. Since 2008, there have been two updates to the Scoping Plan. Each of the Scoping Plans have included a suite of policies to help the state achieve its GHG targets, in large part leveraging existing programs whose primary goal is to reduce harmful air pollution. The 2017 Scoping Plan identifies how the state can reach the 2030 climate target to reduce GHG emissions by 40 percent from 1990 levels, and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The AB 32 Scoping Plan also anticipates that local government actions will result in reduced GHG emissions because local governments have the primary authority to plan, zone, approve, and permit development to accommodate population growth and the changing needs of their jurisdictions. The Scoping Plan also relies on the requirements of Senate Bill 375 (discussed below) to align local land use and transportation planning for achieving GHG reductions.

The Scoping Plan must be updated every five years to evaluate AB 32 policies and ensure that California is on track to achieve the GHG reduction goals. On December 15, 2022, CARB adopted the 2022 Scoping Plan. The 2022 Scoping Plan builds on the previous Scoping Plans as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85 percent below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world.

Senate Bill 375

In August 2008, the legislature passed, and on September 30, 2008, Governor Schwarzenegger signed, SB 375 (Steinberg), which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see Executive Order S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations (MPOs) will be responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or Alternative Planning Strategy. On September 23, 2010, CARB adopted the SB 375 targets for the regional MPOs.

Executive Order B-30-15 – 2030 Statewide Emission Reduction Target

Executive Order B-30-15 was signed by then Governor Jerry Brown on April 29, 2015, establishing an interim statewide GHG reduction target of 40 percent below 1990 levels by 2030, which is necessary to guide regulatory policy and investments in California in the midterm, and put California on the most cost-effective path for long-term emission reductions. Under this Executive Order, all state agencies with jurisdiction over sources of GHG emissions are required to continue to develop and implement emissions reduction programs to reach the state's 2050 target and attain a level of emissions necessary to avoid

dangerous climate change. According to the Governor's Office, this Executive Order is in line with the scientifically established levels needed in the United States to limit global warming below 2°C – the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels.

Senate Bill 32 (Chapter 249, Statutes of 2016)

Senate Bill 32 was signed on September 8, 2016, by then Governor Jerry Brown. SB 32 requires the state to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80 percent below 1990 levels by 2050. A related bill that was also approved in 2016, AB 197 (Chapter 250, Statutes of 2016) creates a legislative committee to oversee regulators to ensure that CARB is not only responsive to the Governor, but also the Legislature.

AB 398 – Extension of Cap-and-Trade Program to 2030 (Chapter 617, Statutes of 2017)

AB 398 was signed by then Governor Brown on July 25, 2017, and became effective immediately as urgency legislation. AB 398, among other things, extended the cap-and-trade program through 2030.

Senate Bill 97 (Chapter 185, Statutes of 2007)

SB 97 (Health and Safety Code Section 21083.5) was adopted in 2007 and required the Office of Planning and Research to prepare amendments to the CEQA Guidelines for the mitigation of GHG impacts. The amendments became effective on March 18, 2010. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of GHG emissions. The CEQA Section gives discretion to the lead agency whether to: (1) use a model of methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. CEQA does not provide guidance to determine whether the project's estimated GHG emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. However, GHG mitigation measures are referenced in general terms, and no specific measures are identified. Additionally, the revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to proposed Section 15183.5(b).

CARB Advanced Clean Truck Regulation

CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission "last-mile" delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty

vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-Emission Truck Sales: Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.
- Company and Fleet Reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

CARB Advanced Clean Fleets Regulation

CARB adopted the Advanced Clean Fleets Regulation in April 2023 which requires fleet owners operating vehicles for private services such as last-mile delivery and federal fleets, along with state and local government fleets to begin their transition to zero-emission vehicles in 2024. In addition, drayage trucks are required to be zero-emissions by 2035, work trucks and day cab tractors must be zero-emission by 2039, and sleeper cap tractors and specialty vehicles must be zero-emission by 2042. The Advanced Clean Fleets rule includes an end to combustion truck sales in 2036.

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CALGreen) is updated every three years. The most recent update was the 2022 California Green Building Code Standards became effective on January 1, 2023.

The CALGreen standards that reduce GHG emissions and are applicable to the proposed Project include, but are not limited to, the following:

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight, and glare ratings per Table 5.106.8 (5.106.8).

- Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
- Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 SF or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 SF. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 SF and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

The CALGreen Building Standards Code has been adopted by the City of Tustin by reference in Municipal Code Section 8100.

City of Tustin General Plan

The City of Tustin addresses greenhouse gas generating activities in the Conservation, Open Space, and Recreation Element of the General Plan. The following policies are applicable to the proposed Project:

Goal 1 **Reduce air pollution through proper land use, transportation and energy planning.**

Policy 1.3 Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.7 Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.

Goal 2 **Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.**

Policy 2.1 Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2 Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.6 Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.

Goal 4 **Reduce emissions through reduced energy consumption.**

Policy 4.1 Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

Policy 4.2 Promote local recycling of waste and the use of recycled materials.

5.3.3 ENVIRONMENTAL SETTING

Gases that trap heat in the atmosphere are called GHGs. The major concern with GHGs is that increases in their concentrations are causing global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different warming potential, and CO_2 is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO_2 equivalents (CO_2e). For example, SF_6 is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF_6, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG, with 22,800 times the global warming potential as CO_2. Therefore, an emission of one metric ton (MT) of SF_6 could be reported as an emission of 22,800 MT of CO_2e. Large emission sources are reported in million metric tons (MMT) of CO_2e. The principal GHGs are described below, along with their global warming potential.

Carbon dioxide: Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (manmade) sources are from burning coal, oil, natural gas, and wood.

Methane: Methane (CH_4) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years, and its global warming potential is 28. Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.

Nitrous oxide: Nitrous oxide (N_2O) (laughing gas) is a colorless GHG that has a lifetime of 121 years, and its global warming potential is 265. Sources include microbial processes in soil and water, fuel combustion, and industrial processes.

Sulfur hexafluoride: Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas that has a lifetime of 3,200 years and a high global warming potential of 23,500. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.

Perfluorocarbons: Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Their global warming potential ranges from 7,000 to 11,000. Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.

Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are a group of GHGs containing carbon, chlorine, and at least one hydrogen atom. Their global warming potential ranges from 100 to 12,000. Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.

Some of the potential effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more forest fires, and more drought years (CARB, 2009). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects:

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

There are also many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

GHGs are produced by both direct and indirect emissions sources. Direct emissions include consumption of natural gas, heating and cooling of buildings, landscaping activities and other equipment used directly by land uses. Indirect emissions include the consumption of fossil fuels for vehicle trips, electricity generation, water usage, and solid waste disposal.

Existing California GHG Conditions

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls; but is still a substantial contributor to the U.S. emissions inventory total. CARB compiles GHG inventories for the state. Based upon the 2022 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2021 GHG emissions period, California emitted an average of 381.3 million metric tons of CO_2e ($MMTCO_2e$) per year (CARB, 2024).

5.3.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines indicates that a project could have a significant effect if it were to:

GHG-1 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

GHG-2 Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

CEQA Guidelines Section 15064.4 provides discretion to the lead agency whether to: (1) use a model of methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. In addition, CEQA does not provide guidance to determine whether the project's estimated GHG emissions are significant, but recommends that lead agencies consider several factors that may be used in the determination of significance of project related GHG emissions, including:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Section 15130(f) describes that the effects of GHG emissions are by their very nature cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis. Additionally, CEQA Guidelines Section 15064(h)3 states that a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides requirements to avoid or lesson the cumulative problem.

The SCAQMD formed a working group to identify greenhouse gas emissions thresholds for land use projects that could be used by local lead agencies in the Basin in 2008. The working group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold, that could be applied by lead agencies, which includes the following tiered approach:

- Tier 1 consists of evaluating whether the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 $MTCO_2e$ per year
  - Based on land use type:
    - Residential: 3,500 $MTCO_2e$ per year
    - Commercial: 1,400 $MTCO_2e$ per year
    - Mixed use: 3,000 $MTCO_2e$ per year
    - Industrial use: 10,000 $MTCO_2e$ per year when SCAQMD is the lead agency

SCAQMD used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

For the purpose of this analysis, the proposed project will be compared to the SCAQMD screening-level Tier 3 Numerical Screening Threshold of 3,000 $MTCO_2e$ per year for all land use type projects, which is consistent with the threshold used in the 2017 SEIR.

5.3.5 METHODOLOGY

The California Emissions Estimator Model (CalEEMod) version 2022.1 is the most recent version and has been used to determine construction and operational GHG emissions from the proposed Project. The purpose of this model is to calculate construction-source and operational-source GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures, if applied. Construction emissions are quantified and per SCAQMD methodology, the total GHG emissions for construction activities are divided by 30-years, and then added to the annual operational phase of GHG emissions.

In addition, CEQA requires the lead agency to consider the extent to which the proposed Project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Therefore, this section addresses whether the proposed Project complies with various programs and measures designed to reduce GHG emissions. There is no statewide program or regional program or plan that has been adopted with which all new development must comply; thus, this analysis has identified the most relevant to the City of Tustin and the proposed Project.

5.3.6 ENVIRONMENTAL IMPACTS

Summary of Impacts Previously Identified

The certified FEIS/EIR did not evaluate greenhouse gas (GHG) emissions impacts because it was not included in the CEQA Guidelines Appendix G checklist, and the City of Tustin did not have adopted thresholds, at the time of preparation. However, the 2017 SEIR did analyze GHG emissions.

The 2017 Draft SEIR found that annual GHG emissions associated with both the Adopted TLSP, and the Modified Project would exceed the SCAQMD bright-line threshold of 3,000 $MTCO_2e$ per year (2017 Draft SEIR, p. 5.2-23). In addition, both the Adopted TLSP and Modified Project would also exceed the AB 32 and forecasted SB 32 efficiency metrics. However, under full buildout conditions, the Modified Project would reduce annual emissions by 12,239 $MTCO_2e$ per year compared to the Adopted TLSP, which represents a 5 percent overall decrease. The reductions would primarily be in the energy and transportation sectors. For the energy sector, the reduction is attributed to the overall decrease in non-residential square footage. Mitigation Measures AQ-3 and AQ-4 related to non-residential projects were included to reduce potentially significant GHG emissions, which were focused on the future implementation of Transportation Demand Management (TDM) techniques. With implementation of Mitigation Measures AQ-3 and AQ-4 related to non-residential project trips, Pursuant to Public Resources Code § 21166 and CEQA Guidelines § 15162, the changes proposed by the 2017 TLSP SPA were determined to not result in any new impacts, or increase the severity of impacts, with respect to GHG emissions impacts.

The 2017 SEIR Initial Study found that, regarding CEQA Section 21166 and CEQA Guidelines Section 15162(a), the changes proposed by the 2017 TLSP SPA would not result in any new impacts or increase the severity of impacts with respect to conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions (PlaceWorks, 2015, p. 55). The Initial Study found that the project was

consistent with both applicable plans adopted for the purposes of reducing GHG, CARB's 2008 Scoping Plan and SCAG's 2012 RTP/SCS. Therefore, impacts were determined to be less than significant, and this topic was not carried forward in the 2017 SEIR.

Proposed TLSP Amendment Project

Since certification of the 2017 SEIR, the SCAG RTP/SCS has undergone several updates. The RTP/SCS is revised every four years. On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal (2020–2045 RTP/SCS), and the addendum to the Connect SoCal Program Environmental Impact Report. The updated 2024 SCAG Connect SoCal RTP/SCS was officially adopted in April 2024 as the new RTP/SCS for the SCAG jurisdiction. Several updates are reflected within the Connect SoCal 2024 plan, including growth projections and forecasting for the region. Connect SoCal 2024 reflects a continuation of the shift toward more efficient resource management. Although the document has been adopted by SCAG, the RTP/SCS still requires certification from the state, which has not yet occurred and is ongoing as of the release date of this Draft SEIR. A principal requirement of the RTP is that the USEPA Transportation Conformity Regulations are complied with at the regional level. The California Sustainable Communities and Climate Protection Act of 2008, better known as Senate Bill 375, mandates the integration of transportation, land use, and housing planning with the objective of smarter growth. Under SB 375, the California Air Resources Board issues a travel-based greenhouse gas (GHG) emissions reduction target for the region and requires MPOs to develop a Sustainable Communities Strategy that demonstrates target achievement in alignment with the RTP and the Regional Housing Needs Assessment (RHNA). SCAG's 6th cycle RHNA methodology allocated the majority of the region's housing need to jurisdictions on the basis of job accessibility and transit accessibility as defined in Connect SoCal 2020. As such, ensuring that local plans to accommodate this need are reflected in Connect SoCal 2024's forecasted regional development pattern is one tool in achieving the region's GHG and conformity targets.

Since certification of the 2017 SEIR, the CARB Scoping Plan has undergone several updates as well. A 2017 CARB Scoping Plan was adopted to achieve California's 2030 GHG Target. Additionally, the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279.

IMPACT GHG-1: THE PROJECT WOULD GENERATE GHG EMISSIONS, EITHER DIRECTLY OR INDIRECTLY, THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT.

Significant and Unavoidable Impact.

Construction

As described in Section 3, *Project Description*, buildout of the proposed TLSP Amendment is analyzed to occur between 2025 and 2045, which provides for a conservative analysis of emissions impacts. The construction-related activities for future development pursuant to the proposed TLSP Amendment would likely involve site preparation, excavation, grading, paving, construction of structures and infrastructure, and architectural coatings. These construction activities would result in the emission of GHGs from equipment exhaust, construction-related vehicular activity and construction worker automobile trips. Total estimated construction related GHG emissions from construction from buildout of the proposed TLSP Amendment were amortized over 30 years per SCAQMD methodology. As shown on Table 5.3-1, it is estimated that buildout would result in 201,303.0 $MTCO_2e$ construction emissions. When annualized over 30-years per SCAQMD methodology, annual emissions would be 6,710.0 $MTCO_2e$. However, as detailed in Section 5.1, *Air Quality*, and listed below, construction within the TLSP area is required to implement 2017 SEIR MM AQ-5, which requires the use of equipment meeting CARB Tier 4 emissions standards or higher for off-road diesel-

powered construction equipment with more than 50 horsepower during construction activities, which was not included in the modeling and would reduce total construction emissions.

Operation

Operation of the new residential uses proposed in the TLSP Amendment would generate GHG emissions from vehicle trips, electricity and natural gas consumption, water, and wastewater transport (the energy used to pump water), and solid waste generation. GHG emissions from electricity consumed by the new residential uses would be generated off site by fuel combustion at the electricity provider. GHG emissions from water transport are also indirect emissions resulting from the energy required to transport water from its source. GHG emissions from solid waste disposal are associated with the anaerobic breakdown of material.

As shown in Table 5.3-1, construction and operation of the new residential uses proposed in the TLSP Amendment would generate 115,031.4 $MTCO_2e$ per year ($MTCO_2e$/yr), an increase of approximately 35,133.7 $MTCO_2e$/yr over buildout of the existing TLSP. All of these emissions would exceed the SCAQMD threshold of 3,000 MT CO2e/yr.

Table 5.3-1: Project Generated Increase in Greenhouse Gas Emissions

Emissions Source	Operational Emissions (MT/yr)			
	CO_2	CH_4	N_2O	CO_2e
Approved Project				
Approved Project Mobile Sources	55,046.0	2.4	2.4	55,820.0
Approved Project Area Sources	1,142.9	<0.1	<0.1	1,144.5
Approved Project Energy Sources	15,610.0	1.1	0.1	15,665.0
Approved Project Water Sources	790.2	13.2	0.3	1,213.4
Approved Project Waste Sources	641.7	64.1	0.0	2,245.2
Total Approved Project Emissions	73,230.0	80.8	2.8	76,088.1
Approved Project Amortized Construction Emissions				3,809.6
Total Approved Project Annual Emissions				**79,897.7**
SCAQMD Threshold				3,000
Exceed?				**Yes**
Proposed Modified Project				
Proposed Modified Project Mobile Sources	68,399.0	2.9	2.9	69,330.0
Proposed Modified Project Area Sources	2,350.6	0.1	<0.1	2,353.7
Proposed Modified Project Energy Sources	30,192.0	2.1	0.2	30,296.0
Proposed Modified Project Water Sources	1,695.3	25.0	0.6	2,501.2
Proposed Modified Project Waste Sources	1,097.7	109.7	0.0	3,840.4
Proposed Modified Project Emissions	103,735	139.8	3.6	108,321.3
Proposed Modified Project Amortized Construction Emissions				6,710.1
Total Proposed Modified Project Annual Emissions				**115,031.4**
SCAQMD Threshold				3,000
Exceed?				**Yes**
Increase in Emissions (Proposed Modified Project – Approved Project)				**35,133.7**

CH4 = methane, CO_2 = carbon dioxide, CO_2e = carbon dioxide equivalent, MT/yr = metric tons per year, N_2O = nitrous oxide, SCAQMD = South Coast Air Quality Management District.
Source: *Air Quality, Energy, and Greenhouse Gas Impact Analysis* (Appendix B)

Consistent with buildout of the existing TLSP, a majority of the GHG emissions generated from buildout and operation of the proposed TLSP Amendment are associated with mobile sources. As detailed in Section 5.1, *Air Quality*, and listed below, the 2017 SEIR Mitigation Measures MM AQ-3 and MM AQ-4 would require TDM measures for future employment uses within the TLSP area, and MM AQ-5 would require use of Tier construction equipment, which would lower GHG emissions from operation of the proposed uses included in the proposed TLSP Amendment.

Also, as detailed in Section 5.1, *Air Quality*, and listed below, additional mitigation is provided, which includes Mitigation Measure AQ-1: Vehicle Trip Reduction, Mitigation Measure AQ-2: Prohibition of Fireplaces, Mitigation Measure AQ-3: Electric Landscape Equipment, and Mitigation Measure AQ-4: Low VOC Paint (Operations) would reduce operational air quality emissions and would also reduce GHG emissions.

Additionally, Mitigation Measure GHG-1 is included to require installation of photovoltaic solar panels to the maximum roof area; Mitigation Measure GHG-2 is included to require the new development projects meet or exceed CALGreen Tier 2 standards with charging stations; and Mitigation Measure GHG-3 is included to require use of energy efficient appliances.

Further, the new residential development generated from the proposed TLSP Amendment would be located within an area with bicycle lanes and sidewalks and implements a mix of uses within the TLSP area that would provide for non-vehicular travel that would reduce GHG emissions. However, mitigation to substantially reduce the proposed Project's mobile GHG emissions is not feasible due to the limited ability of the future developments and City to reduce emissions from mobile sources. Neither the project applicants nor the Lead Agency (City of Tustin) can substantively or materially affect reductions in mobile-source emissions.

Overall, impacts related to buildout of the proposed TLSP Amendment would be consistent with the impact conclusions set forth in the 2017 SEIR, which determined that impacts related to GHG emissions would be significant and unavoidable.

IMPACT GHG-2: THE PROJECT WOULD NOT CONFLICT WITH AN APPLICABLE PLAN, POLICY OR REGULATION OF AN AGENCY ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSION OF GHGS.

Less than Significant Impact. The proposed TLSP Amendment would provide for housing near freeways and transit in an employment and commercial area to plan for projected growth in the region and help to improve the jobs to housing balance (detailed in Section 5.6, *Population and Housing*). The proposed TLSP Amendment would provide more housing within an area with employment, services, and retail commercial that has the potential to reduce GHG emissions from the reduction of VMT. The close location of complementary uses would limit the need to travel outside of the TLSP area for many amenities and retail/service needs. The pedestrian and bicycle infrastructure and Orange County Transportation Authority (OCTA) bus routes promote non-vehicular transportation and reduce the vehicle miles traveled and related GHG emissions. Providing additional residential within a mixed-use location is consistent with the intent of the AB 32 Scoping Plan and SB 375, which is focused on changing land use patterns and improving transportation alternatives.

The proposed Project would be implemented pursuant to the CALGreen Building/Title 24 requirements and would provide new land uses in a sustainable manner. The City's administration of the Title 24 requirements includes review of proposed energy conservation measures during the permitting process, which ensures that all requirements are met. Typical Title 24 measures include insulation; use of energy-efficient heating, ventilation, and air conditioning equipment; solar-reflective roofing materials; energy-efficient indoor and outdoor lighting systems; reclamation of heat rejection from refrigeration equipment to generate hot water;

and incorporation of skylights, and solar infrastructure. In complying with the Title 24 standards, the proposed Project would be implementing regulations that reduce GHG emissions.

Also, the CARB Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32. The CARB Scoping Plan recommendations serve as statewide measures to reduce GHG emissions levels. The proposed Project would be consistent with the applicable measures established in the 2022 Scoping Plan, as shown in Table 5.3-2. The proposed TLSPA Amendment would be consistent with SCAG strategies to provide infill residential development and increase the availability of transit-oriented development. In addition, as shown in Section 5.4, *Land Use and Planning*, the proposed TLSP Amendment is consistent with SCAG's 2024 Connect SoCal RTP/SCS.

CARB Scoping Plan

The new development pursuant to the proposed TLSP Amendment would include energy-efficient/energy-conserving design features and operation of the new commercial, residential, and open space areas would not interfere with the state's implementation of AB 1279's target of 85 percent below 1990 levels and carbon neutrality by 2045 because it does not interfere with implementation of the GHG reduction measures listed in CARB's Updated Scoping Plan (2022), as demonstrated in Table 5.3-2. CARB's 2022 Scoping Plan reflects the 2045 target of an 85 percent reduction below 1990 levels, set by Executive Order B-55-18, and codified by AB 1279. In addition, the proposed TLSP Amendment would be consistent with the following state policies that were adopted for the purpose of reducing GHG emissions.

As detailed in Table 5.3-2 and the discussion below, the proposed Project would not conflict with the CARB Scoping Plan and related regulations.

- Pavley emissions standard and Low Carbon Fuel Standard: Pavley emissions standards (AB 1493) apply to all new passenger vehicles and the Low Carbon Fuel Standard became effective in 2010 and regulates the transportation fuel used. The second phase of implementation of the Pavley regulations per AB 1493 is referred to as the Advanced Clean Car program, which combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for current model years through 2025. The regulation reduces GHGs from new cars by 34 percent from 2016 levels by 2025. The proposed Project is consistent with these requirements as they apply to all new passenger vehicles and vehicle fuel purchased in California.
- Medium/Heavy-Duty Vehicle Regulations: Medium/heavy-duty vehicle regulations are implemented by the state to reduce emissions from trucks. Since the new development that would occur pursuant to the proposed TLSP Amendment would utilize trucks for construction and some operational purposes, these regulations would aid in reducing GHG emissions. The proposed Project is consistent with this measure and its implementation as medium and heavy-duty vehicles associated with construction and operation would be required to comply with the requirements of this regulation.
- Tractor-Trailer Greenhouse Gas Regulation: Tractor-trailers subject to this state regulation are primarily 53-foot or longer box-type trailers, are required to be either use USEPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The proposed Project would be consistent with this regulation, as it applies to specific trucks that are used throughout the state.
- Energy Efficiency – Title 24/CALGreen: The new development that would occur pursuant to the proposed TLSP Amendment would be subject to the CALGreen Code Title 24 building energy efficiency requirements that offer builders better windows, insulation, lighting, ventilation systems, and other features as listed in Section 5.5.2, Regulatory Setting that reduce energy consumption. Compliance with the CALGreen standards would be verified by the City during the building permitting process.
- Renewable Portfolio Standard. As a customer of Southern California Edison (SCE), the p new development that would occur pursuant to the proposed TLSP Amendment would purchase from an

increasing supply of renewable energy sources and more efficient baseload generations, reduce GHG emissions, and be consistent with this requirement.

- Million Solar Roofs Program: The proposed Project is consistent with this scoping plan measure as the new development that would occur pursuant to the proposed TLSP Amendment would be required to comply with existing CALGreen/Title 24 standards, including the installation of solar panels.
- Water Efficiency and Waste Diversion: Development and operation of new development that would occur pursuant to the proposed TLSP Amendment would be implemented in consistency with water conservation requirements (as included in CALGreen/Title 24) and solid waste recycling and landfill diversion requirements of the State.

Table 5.3-2: Project Consistency with the CARB 2022 Scoping Plan

Action	Consistency
GHG Emissions Reductions Relative to the SB 32 Target	
40 percent below 1990 levels by 2030.	**Consistent.** The new development pursuant to the proposed TLSP Amendment would comply with the Title 24, Part 6 building energy requirements along with other local and state initiatives that aim to achieve the 40 percent below 1990 levels by 2030 goal. This would be ensured through the City's existing development permitting process. Further, the 2017 SEIR Mitigation Measures MM AQ-3 and MM AQ-4 would require TDM measures for future employment uses within the TLSP area, and MM AQ- would require use of Tier construction equipment, which would lower GHG emissions from operation of the proposed uses included in the proposed TLSP Amendment.
Smart Growth/Vehicle Miles Traveled VMT	
VMT per capita reduced 25 percent below 2019 levels by 2030, and 30 percent below 2019 levels by 2045.	**Consistent.** As discussed in Section 5.8, *Transportation*, the Project's HB VMT per capita would be 32.1% below the City's threshold under base conditions and 20.3% below the City's threshold under future conditions. Thus, the Project would result in less than significant impacts related to VMT and is consistent with policies aimed at reducing VMT.
Light-Duty Vehicle (LDV) Zero-Emission Vehicles (ZEVs)	
100 percent of LDV sales are ZEV by 2035.	**Consistent.** The proposed Project would be designed and constructed in accordance with the Title 24 Part 6 and Part 11 requirements, which includes ZEV designated parking spaces and charging stations.
Truck ZEVs	
100 percent of medium-duty (MDV)/HDC sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report).	**Consistent.** The new development pursuant to the proposed TLSP Amendment would be designed and constructed in accordance with the most updated Title 24 regulations, which includes prewiring for truck ZEV charging stations and/or providing electrical plug-ins at designated commercial loading docks.
Aviation	
20 percent of aviation fuel demand is met by electricity (batteries) or hydrogen (fuel cells) in 2045. Sustainable aviation fuel meets most or the rest of the aviation fuel demand that has not already transitioned to hydrogen or batteries.	**Not Applicable.** The proposed Project would not utilize aviation fuel.

Action	Consistency
Ocean-going Vessels (OGV)	
2020 OGV At-Berth regulation fully implemented, with most OGVs utilizing shore power by 2027. 25 percent of OGVs utilize hydrogen fuel cell electric technology by 2045.	**Not Applicable.** The proposed Project would not utilize any OGVs.
Port Operations	
100 percent of cargo handling equipment is zero-emission by 2037. 100 percent of drayage trucks are zero emission by 2035.	**Not Applicable.** The proposed Project would not impact any operations at any ports.
Freight and Passenger Rail	
100 percent of passenger and other locomotive sales are ZEV by 2030. 100 percent of line haul locomotive sales are ZEV by 2035. Line haul and passenger rail rely primarily on hydrogen fuel cell technology, and others primarily utilize electricity.	**Not Applicable.** The proposed Project would not involve any rail operations.
Oil and Gas Extraction	
Reduce oil and gas extraction operations in line with petroleum demand by 2045.	**Not Applicable.** The proposed Project would not involve any oil or gas extraction.
Petroleum Refining	
CCS on majority of operations by 2030, beginning in 2028. Production reduced in line with petroleum demand.	**Not Applicable.** The proposed Project would not involve any petroleum refining.
Electricity Generation	
Sector GHG target of 38 million metric tons of carbon dioxide equivalent ($MTCO_2e$) in 2030 and 30 $MTCO_2e$ in 2035. Retail sales load coverage134 20 gigawatts (GW) of offshore wind by 2045. Meet increased demand for electrification without new fossil gas-fired resources.	**Consistent.** The proposed Project would comply with the Title 24, Part 6 building requirements, including related to renewable energy generation requirements as well as improved insulation reducing energy consumption.
New Residential and Commercial Buildings	
All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030.	**Consistent.** The proposed Project would comply with the Title 24, Part 6 building energy requirements.
Existing Residential Buildings	
80 percent of appliance sales are electric by 2030 and 100 percent of appliance sales are electric by 2035. Appliances are replaced at end of life such that by 2030 there are 3 million all-electric and electric-ready homes—and by 2035, 7 million homes—as well as contributing to 6 million heat pumps installed statewide by 2030.	**Consistent.** The proposed Project does not involve the operation of any existing residential buildings. However, appliances within future residences would comply with the Title 24, Part 6 building energy requirements.
Existing Commercial Buildings	
80 percent of appliance sales are electric by 2030, and 100 percent of appliance sales are electric by 2045. Appliances are replaced at end of life, contributing to 6 million heat pumps installed statewide by 2030.	**Consistent.** The proposed Project does not involve the continued operations of existing commercial buildings. However, appliances within future buildings would comply with the Title 24, Part 6 building energy requirements.

Action	Consistency
Energy Demand	
7.5 percent of energy demand electrified directly and/or indirectly by 2030; 75 percent by 2045.	**Consistent.** The new development pursuant to the proposed TLSP Amendment would comply with the Title 24, Part 6 building energy requirements, including renewable energy generation requirements, as well as improved insulation reducing energy consumption.
Construction Equipment	
25 percent of energy demand electrified by 2030 and 75 percent electrified by 2045.	**Consistent.** Through City permitting, the new development pursuant to the proposed TLSP Amendment would be required to use construction equipment that is registered by CARB and meet CARB's standards. CARB sets its standards to be in line with the goal of reducing energy demand by 25 percent in 2030 and 75 percent in 2045.
Energy Generation	
Electrify 0 percent of boilers by 2030 and 100 percent of boilers by 2045. Hydrogen for 25 percent of process heat by 2035 and 100 percent by 2045. Electrify 100 percent of other energy demand by 2045.	**Consistent.** The new development pursuant to the proposed TLSP Amendment would comply with the Title 24, Part 6 building energy requirements, including installing electrical wiring for all built in appliances, electric outlets for landscape equipment, solar panels, and provision of electric charging stations.
Stone, Clay, Glass, and Cement	
CCS on 40 percent of operations by 2035 and on all facilities by 2045. Process emissions reduced through alternative materials and CCS.	**Not Applicable.** Uses proposed in the TLSP Amendment do not involve manufacturing or storage of stone, clay, glass, or cement.
Other Industrial Manufacturing	
0 percent energy demand electrified by 2030 and 50 percent by 2045.	**Not Applicable.** The proposed TLSP Amendment does not include industrial manufacturing, but would comply with the Title 24, Part 6, including increases in renewable energy generation requirements as well as improved insulation reducing energy consumption.
Combined Heat and Power	
Facilities retire by 2040.	**Not Applicable.** The proposed TLSP Amendment does not involve any existing combined heat and power facilities.
25 percent energy demand electrified by 2030 and 75 percent by 2045.	**Not Applicable.** The proposed TLSP Amendment does not involve generation of energy; but future development per the proposed TLSP Amendment would comply with the Title 24 renewable energy generation requirements.
Low Carbon Fuels for Transportation	
Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen.	**Not Applicable.** The proposed TLSP Amendment does not involve any production of biofuels.
Low Carbon Fuels for Buildings and Industry	
In 2030s, biomethane135 blended in pipeline Renewable hydrogen blended in fossil gas pipeline at 7 percent energy (~20 percent by volume), ramping up between 2030 and 2040. In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters	**Not Applicable.** The proposed TLSP Amendment does not involve any production of fuels for buildings and industry.
Non-combustion Methane Emissions	
Increase landfill and dairy digester methane capture.	**Not Applicable.** The proposed TLSP Amendment does not involve any landfill and/or dairy uses.

Action	Consistency
Some alternative manure management deployed for smaller dairies. Moderate adoption of enteric strategies by 2030. Divert 75 percent of organic waste from landfills by 2025. Oil and gas fugitive methane emissions reduced 50 percent by 2030 and further reductions as infrastructure components retire in line with reduced fossil gas demand.	
High GWP Potential Emissions	
Low GWP refrigerants introduced as building electrification increases, mitigating HFC emissions.	**Consistent.** The new development pursuant to the proposed TLSP Amendment would comply with the Title 24, Part 6 building energy requirements, including use of low GWP refrigerants, which would be verified through the City's existing development permitting process.

Scoping Plan Appendix D, Local Actions

The 2022 CARB Scoping Plan includes a set of Local Actions set forth in Appendix D to the Scoping Plan, which aim at providing local jurisdictions with tools to reduce GHG emissions to assist the state in reaching the reduction targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section for evaluating plan-level and project-level alignment with the State's Climate Goals within CEQA GHG analysis. Within this section, CARB identifies multiple recommendations and strategies that should be considered for new development to demonstrate consistency with the 2022 Scoping Plan. Specifically, this section is focused on strategies for residential and mixed-use projects. The document is organized into two categories: examples of plan-level GHG reduction actions that could be implemented by local governments and examples of onsite project design features and mitigation measures that could be applied to individual projects under CEQA.

The future development that would occur pursuant to the proposed TLSP Amendment would include a number of example project design features and mitigation measures from the 2022 CARB Scoping Plan for construction and operation. For instance, the Scoping Plan's construction measures include enforcing idling time restrictions on construction vehicles, requiring construction vehicles to operate highest tier engines commercially available, diverting and recycling construction waste, minimizing tree removal, and increased use of electric and renewable fuel powered construction equipment and required renewable diesel fuel where commercially available. These measures are consistent with existing requirements for idling trucks [CCR Title 13, Motor Vehicles, Section 2449(d)(3)] and the 2017 SEIR Mitigation Measure AQ-5, which requires use of Tier 4 construction equipment.

Appendix D Notes that residential and mixed-use projects that meet the following three priority areas are clearly consistent with the State's goals and would accommodate growth in a manner which is consistent with the State's GHG reduction and equity prioritization goals.

- Transportation Electrification. Table 3 in Appendix D to the 2022 CARB Scoping Plan notes that to be consistent with the State's goals, projects should provide EV charging infrastructure that, at minimum, meets the CALGreen code. The new development pursuant to the proposed TLSP Amendment would be required to meet CALGreen standards.
- VMT Reduction. The Scoping Plan notes that to be consistent with the VMT reduction attribute, projects should be located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer); do not result in the loss or conversion of natural and

working lands; and consist of transit-supportive densities in areas with both employment and residential uses. The proposed TLSP Amendment provides for additional infill residential development that would be surrounded by existing urban uses, does not result in the loss of natural and working lands. The proposed TLSP Amendment would locate residential near commercial retail services, office, and other uses that would reduce mobile-source emissions. In addition, both the 2017 SEIR mitigation measures and the additional mitigation measures included herein require VMT reduction features, services, and information provision.

- Building Decarbonization. Building decarbonization involves maximizing energy efficiency and eliminating the use of fossil fuel consumption. Future developments pursuant to the proposed TLSP Amendment would be required to meet CALGreen energy efficiency standards, including electric charging stations. Mitigation Measure AQ-3 requires the use of electric landscape equipment, Mitigation Measure GHG-2 requires projects meet CalGreen Tier 2 standards and provide charging stations, and Mitigation Measure GHG-3 requires installation of Energy Star or equivalent energy efficiency rated appliances. Therefore, the future development that would occur pursuant to the proposed TLSP Amendment would be developed in a manner that promotes energy efficiency and minimizes the reliance on fossil fuels.

As the proposed TLSP Amendment would implement key residential and mixed-use attributes included in Appendix D and the proposed Project would be consistent with the actions and strategies set forth in Appendix D of the 2022 CARB Scoping Plan.

General Plan

The City's General Plan also includes several policies related to reduction of GHG emissions. The applicable policies and the proposed TLSP Amendment's consistency are described in Table 5.3-3.

Table 5.3-3: Consistency with General Plan Energy Related Policies

General Plan Policy	Project Consistency
Conservation, Open Space, and Recreation Element	
Policy 1.3 Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.	**Consistent**. The proposed TLSP Addendum would provide for additional multiple family developments close to commercial areas within the TLSP that would encourage pedestrian travel.
Policy 1.7 Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.	**Consistent**. As detailed in Section 5.8, *Transportation*, The TLSP Recreational Bikeway/Trail Concept Plan links to adjacent on- and off-road bikeways/trails as identified in Figure 5.8-2, *TLSP Bikeways and Trails Plan*, that would provide biking alternatives for transportation and recreational use. The proposed TLSP Amendment would provide for additional residences close to the bikeways that would implement usage.
Policy 2.1 Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.	**Consistent**. The proposed TLSP Amendment would provide for additional residences close to services, recreation, employment, and retail/restaurant uses that would reduce vehicle trips.
Policy 2.2 Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.	**Consistent**. The proposed TLSP Amendment would provide for additional residences close to services, recreation, employment, and retail/restaurant uses that would reduce vehicle trips.

General Plan Policy	Project Consistency
Policy 2.6 Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.	**Consistent**. As detailed in Section 5.8, *Transportation*, The TLSP Recreational Bikeway/Trail Concept Plan links to adjacent on- and off-road bikeways/trails as identified in Figure 5.8-2, *TLSP Bikeways and Trails Plan*, that would provide biking and pedestrian alternatives for transportation. The proposed TLSP Amendment would provide for additional residences close to the bikeways and pedestrian pathways that would encourage non-motorized transportation.
Policy 4.1 Promote energy conservation in all sectors of the City including residential, commercial, and industrial.	**Consistent**. Energy conservation would be promoted in all new TLSP development by compliance with existing energy related regulations including Title 24 and CalGreen that would be verified during the development review and permitting process of each project.
Policy 4.2 Promote local recycling of waste and the use of recycled materials.	**Consistent**. Recycling and use of recycled materials would be promoted in all new TLSP development by compliance with existing regulations including Title 24 and CalGreen that would be verified during the development review and permitting process of each project.

The proposed Project is consistent with AB 32 and SB 32 through implementation of municipal code measures that address GHG emissions related to building energy, solid waste management, wastewater, and water conveyance, which would be verified by the City during the Project development review and permitting process.

Overall, the proposed Project would not result in a conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. The proposed Project would be implemented in compliance with state energy standards provided in Title 24. The proposed Project would not interfere with the state's implementation of AB 1279's target of 85 percent below 1990 levels and carbon neutrality by 2045 because it would be consistent with the CARB 2022 Scoping Plan, which is intended to achieve the reduction targets required by the state. In addition, the proposed Project would be consistent with the relevant City General Plan policies. Thus, the proposed Project would not result in a conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs, and impacts would be less than significant.

5.3.7 CUMULATIVE IMPACTS

GHG emissions impacts are assessed in a cumulative context, since no single project can cause a discernible change to climate. Climate change impacts are the result of incremental contributions from natural processes, and past and present human-related activities. Therefore, the area in which a proposed project in combination with other past, present, or future projects, could contribute to a significant cumulative climate change impact would not be defined by a geographical boundary such as a project site or combination of sites, city or air basin. GHG emissions have high atmospheric lifetimes and can travel across the globe over a period of 50 to 100 years or more. Even though the emissions of GHGs cannot be defined by a geographic boundary and are effectively part of the global issue of climate change, because CEQA only applies to California, the geographic area for analysis of cumulative GHG emissions impacts is the state of California.

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006 (Nunez), recognizes that California is the source of substantial amounts of GHG emissions. The statute begins with several legislative findings and declarations of intent, including the following:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems" (California Health and Safety Code, Section 38501(a)).*

Thus, AB 32 recognizes the significance of the statewide cumulative impact of GHG emissions from sources throughout the state and sets a performance standard for mitigation of that cumulative impact.

The analysis of GHG emission impacts under CEQA contained in this EIR effectively constitutes an analysis of a project's contribution to the cumulative impact of GHG emissions. As described previously, the estimated increase in GHG emissions from buildout of the proposed TLSP Amendment would exceed the 3,000 MTCO2e/yr screening threshold. Therefore, the GHG emissions from the proposed Project would be significant and cumulatively considerable.

5.3.8 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

The following requirements would reduce impacts related to GHG emissions.

- California Assembly Bill 1493 (Pavley)
- California Executive Order S-3-05
- Assembly Bill 32 (Global Warming Solutions Act of 2006)
- Senate Bill 375 (Steinberg)
- California Executive Order B-30-15
- Assembly Bill 1279 (Carbon Neutrality)
- California Energy Code
- California Green Building Standards Code

5.3.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact GHG-1 would be potentially significant.

Impact GHG-2 would be less than significant.

5.3.10 MITIGATION MEASURES

2017 SEIR Mitigation Measures Applicable to the Proposed Project

2017 SEIR MM AQ-3: Prior to the issuance of development permits for new non-residential projects with 100 or more employees, and expanded projects where additional square footage would result in a total of 100 or more employees, the City of Tustin and the City of Irvine, as applicable, shall impose a mix of TDM measures which, upon estimation, would result in an average vehicle ridership of at least 1.5, for each development with characteristics that would be reasonably conducive to successful implementation of such TDM measures. These TDM measures may include one or more of the following, as determined appropriate and feasible by each city on a case-by-case basis:

- Establish preferential parking for carpool vehicles.
- Provide bicycle parking facilities.
- Provide shower and locker facilities.
- Provide carpool and vanpool loading areas.
- Incorporate bus stop improvements into facility design.
- Implement shuttles to shopping, eating, recreation, and/or parking and transit facilities.
- Construct remote parking facilities.
- Provide pedestrian circulation linkages.
- Construct pedestrian grade separations.
- Establish carpool and vanpool programs.
- Provide cash allowances, passes, and other public transit and purchase incentives.
- Establish parking fees for single occupancy vehicles.
- Provide parking subsidies for rideshare vehicles.
- Institute a computerized commuter rideshare matching system.
- Provide a guaranteed ride-home program for ridesharing.
- Establish alternative work week, flex-time, and compressed work week schedules.
- Establish telecommuting or work-at-home programs. Provide additional vacation and compensatory leave incentives.
- Provide on-site lunch rooms/cafeterias and commercial service such as banks, restaurants, and small retail.
- Provide on-site day care facilities.
- Establish an employee transportation coordinator(s).

2017 SEIR MM AQ-4: If not required under each individual development's TDM plan, the City of Tustin and the City of Irvine, as applicable, shall implement the following measures, as determined appropriate or feasible by each city on a case-by-case basis:

- Reschedule truck deliveries and pickups for off peak hours.
- Implement lunch shuttle service from a worksite(s) to food establishments.
- Implement compressed work week schedules where weekly work hours are compressed into fewer than five days, such as 9/80, 4/40, or 3/36.
- Provide on site child care and after school facilities or contribute to off site developments within walking distance.
- Provide on site employee services such as cafeterias, banks, etc.
- Implement a pricing structure for single occupancy employee parking, and/or provide discounts to ride sharers.
- Construct off site pedestrian facility improvements such as overpasses and wider sidewalks.
- Include retail services within or adjacent to residential subdivisions.
- Provide shuttles to major rail transit centers or multi modal stations.
- Contribute to regional transit systems (e.g., right of way, capital improvements, etc.).
- Synchronize traffic lights on streets impacted by development.
- Construct, contribute, or dedicate land for the provision of off site bicycle trails linking the facility to designated bicycle commuting routes.
- Include residential units within a commercial development.
- Provide off site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on site improvements, such as bicycle paths.

- Include bicycle parking facilities such as bicycle lockers.
- Include showers for bicycling and pedestrian employees' use.
- Construct on site pedestrian facility improvements, such as building access, which is physically separated from street and parking lot traffic, and walk paths.

2017 SEIR MM AQ-5: Applicants for new development projects within the Tustin Legacy Specific Plan shall require the construction contractor to use equipment that meets the USEPA Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities, unless it can be demonstrated to the City of Tustin that such equipment is not available.

Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what would be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine, as defined by the California Air Resources Board's regulations.

Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for USEPA Tier 4 or higher emissions standards for construction equipment with more than 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the site for the verification of the City of Tustin. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board Rule 2449.

Proposed TLSP Amendment Project Mitigation Measures

Mitigation Measure AQ-1: Vehicle Trip Reduction. As listed previously in Section 5.1, *Air Quality*.

Mitigation Measure AQ-2: Prohibition of Fireplaces. As listed previously in Section 5.1, *Air Quality*.

Mitigation Measure AQ-3: Electric Landscape Equipment. As listed previously in Section 5.1, *Air Quality*.

Mitigation Measure AQ-4: Low VOC Paint (Operations). As listed previously in Section 5.1, *Air Quality*.

Mitigation Measure GHG-1: Solar Panels. Projects shall be required to install solar photovoltaic (PV) panels or other source of renewable electricity generation onsite, based on the maximum roof area available for solar (i.e., solar-ready zone). The solar-ready zone shall in the minimum, comply with Section 110.10 of the 2022 California Energy Code and shall comply with access, pathway, ventilation, and spacing requirements, and exclude skylight area.

The final PV generation facility size requires approval by Southern California Edison (SCE). SCE's Rule 21 governs operating and metering requirements for any facility connected to SCE's distribution system. Should SCE limit the offsite export, the Projects may utilize a battery energy storage system (BESS) to lower offsite export while maintaining onsite renewable generation to offset consumption. The electrical system and infrastructure must be clearly labeled with noticeable and permanent signage. The schedule of photovoltaic system locations may be updated as needed.

Mitigation Measure GHG-2: LEED/CalGreen Tier 2 Charging Stations. Prior to the issuance of building permits, project applicant or successor in interest shall provide documentation to the City of Tustin demonstrating the following:

- The project shall be designed to achieve Leadership in Energy and Environmental Design (LEED) certification to meet or exceed CALGreen Tier 2 standards in effect at the time of building permit application in order to exceed 2022 Title 24 energy efficiency standards.

- The project shall provide facilities to support electric charging stations per the Tier 2 standards in Section A5.106.5.3 (Nonresidential Voluntary Measures) and Section A5.106.8.2 (Residential Voluntary Measures) of the 2022 CALGreen Code.

Mitigation Measure GHG-3: Energy Efficient Appliances. All major applicant provided in-unit residential appliances (e.g., dishwashers, refrigerators, clothes washers and dryers, water heaters, and for space heating) provided/installed shall be electric (i.e., appliances that do not use natural gas, propane, or other fossil fuels) and Energy Star certified or of equivalent energy efficiency where applicable. Prior to the issuance of the certificate of occupancy, the City of Tustin shall verify implementation of this requirement. Installation of electric Energy Star–certified or equivalent appliances shall be verified by the Planning and Building Department during plan check.

5.3.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The impacts related to GHG emissions would be cumulatively significant and unavoidable after implementation of feasible mitigation. Although the Project would not conflict with an applicable plan adopted for the purpose of reducing GHGs, the level of emissions generated from buildout and operation of the proposed TLSP Amendment would result in cumulatively significant GHG impacts.

5.3.12 REFERENCES

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5.4 Land Use and Planning

5.4.1 INTRODUCTION

In accordance with CEQA Guidelines Section 15125(d), this section provides a summary of the plans, policies, and regulations of the City of Tustin, and regional, state, and federal agencies that have policy and regulatory control over the TLSP area and the proposed Modified Project. Policy conflicts do not, in and of themselves, indicate a significant environmental effect within the meaning of CEQA. To the extent that physical environmental impacts may result from such conflicts, those impacts are analyzed in this SEIR in the specific topical sections to which the impact pertains (e.g., noise, air quality, greenhouse gas emissions, or transportation). More specifically, this section examines the potential for the proposed Modified Project to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect, including relevant goals and policies of the updated City of Tustin General Plan (2018), the City's zoning code, and the SCAG Final 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), "Connect SoCal 2024."

- *City of Tustin General Plan (including 2021-2029 Housing Element). Adopted November 2018 (updated October 2022).*
- *Tustin City Code*
- Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Adopted April 2024.

5.4.2 REGULATORY SETTING

5.4.2.1 Federal Regulations

Federal Facility Site Remediation Agreement

A Federal Facility Site Remediation Agreement (FFSRA) between the Department of the Navy (DON) and California Department of Toxic Substances Control was signed for Former Marine Corps Air Station (MCAS) Tustin on 18 August 1999. The FFSRA defines DON's response action obligations under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and corrective action obligations under the Resource Conservation and Recovery Act.

5.4.2.2 State Regulations

California Planning and Zoning Law

The legal framework under which California cities and counties exercise local planning and land use functions is set forth in California Planning and Zoning Law, Government Code Sections 65000-66499.58. Under State planning law, each city and county must adopt a comprehensive, long-term general plan. State law gives cities and counties wide latitude in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. As stated in Section 65302 of the California Government Code, "The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principle, standard, and plan proposals." While a general plan will contain the community vision for future growth, California law also requires each plan to address the mandated elements listed in Section 65302. The mandatory elements for all jurisdictions are land use,

circulation, housing, conservation, open space, noise, and safety. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals.

5.4.2.3 Local and Regional Regulations

SCAG Final 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), (ConnectSoCal 2024)

The Southern California Association of Governments (SCAG) is designated by federal law as a Metropolitan Planning Organization (MPO) and under state law as a Regional Transportation Planning Agency and a Council of Governments. The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 cities in an area covering more than 38,000 square miles. SCAG develops transportation and housing strategies for Southern California as a whole.

On April 4, 2024, SCAG's Regional Council adopted Connect SoCal (Connect SoCal) - The 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (2024 RTP/SCS), which includes long range regional transportation plans, regional transportation improvement programs, regional housing needs allocations, and other plans for the region. Most of the plan's goals are related to regional transportation infrastructure and the efficiency of transportation in the region.

2024 SCAG Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Connect SoCal 2024)

The 2024 SCAG Connect SoCal RTP/SCS was officially adopted in April 2024 as the new RTP/SCS for the SCAG jurisdiction. Several updates are reflected within the Connect SoCal 2024 plan, including growth projections and forecasting for the region. Connect SoCal 2024 reflects a continuation of the shift toward more efficient resource management. This refers to transportation infrastructure, land resources, and environmental resources. This plan projects that 66 percent of new households and 54 percent of new jobs between 2019–2050 will be in Priority Development Areas, either near transit or in walkable communities.

City of Tustin General Plan

The General Plan (GP) is the City's principal long-range policy and planning document guiding the development, conservation, and enhancement of Tustin. The GP was adopted by the City in 2018 and contains seven elements that provide a comprehensive collection of goals and policies related to the physical development of the City. The City is also required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The 2021-2029 Housing Element Update (HEU) was adopted by the City in 2021 and certified by the State of California Housing and Community Development Department (HCD) in 2022. The land use-related GP goals and policies that are relevant to the Modified Project are listed below by GP Element. All other GP goals and policies are provided in the respective corresponding topical sections within this SEIR.

Land Use Element

Goal 1 **Provide for a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City services.**

Policy 1.1 Preserve the low-density quality of Tustin's existing single-family neighborhoods while permitting compatible multi-family development to meet regional housing needs where best

suited from the standpoint of current development, accessibility, transportation and public facilities.

Policy 1.7 As part of the City's attraction to business and industry, provide adequate sites to house future employees.

Policy 1.10 Ensure that the distribution and intensity of land uses are consistent with the Land Use Plan and classification system.

Goal 2 **Ensure that future land use decisions are the result of sound and comprehensive planning.**

Goal 3 **Ensure that new development is compatible with surrounding land uses in the community, the City's circulation network, availability of public facilities, existing development constraints and the City's unique characteristics and resources.**

Goal 4 **Assure a safe, healthy and aesthetically pleasing community for residents and businesses.**

Policy 4.1 Mitigate traffic congestion and unacceptable levels of noise, odors, dust and light and glare which affect residential areas and sensitive receptors.

Policy 4.2 Ensure a sensitive transition between commercial or industrial uses and residential uses by means of such techniques as buffering, landscaping and setbacks.

Policy 4.3 Where mixed uses are permitted, ensure compatible integration of adjacent uses to minimize conflicts.

Goal 6 **Improve urban design in Tustin to ensure development that is both architecturally and functionally compatible, and to create uniquely identifiable neighborhoods, commercial and business park districts.**

Policy 6.2 Encourage and promote high quality design and physical appearance in all development projects.

Policy 6.4 Preserve and enhance the City's special residential character and "small town" quality by encouraging and maintaining Tustin's low density residential neighborhoods through enforcement of existing land use and property development standards and the harmonious blending of buildings and landscape.

Policy 6.12 Review and revise, as necessary, the City's development standards to improve the quality of new development in the City and to protect the public health and safety.

Goal 8 **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

Policy 8.1 Encourage within economic capabilities, a wide range of accessible public facilities and community services including fire and police protection, flood control and drainage, educational, cultural and recreational opportunities and other governmental and municipal services. Senate Bill (SB) 50, adopted in 1998, prohibits the City from using the inadequacy of school facilities as a basis for denying or conditioning the development of property. SB 50, however, gave school districts new authority to raise school impact mitigation fees. In addition, the voters passed Proposition 1A in November 1998, which provides $9.2 billion dollars in bonds to construct new or expand existing schools. In summary, school districts have the financial means and legal authority to respond to new development.

Policy 8.7 To ensure an orderly extension of essential services and facilities, and preservation of a free-flowing circulation system, continue to require provision of essential facilities and services at the developer's expense where these systems do not exist or are not already part of the City's financed capital improvement program.

Policy 8.8 Maintain and improve, where necessary, the City's infrastructure and facilities.

Goal 14 (Previously Goal 13): Continue to implement the Specific Plan/Reuse Plan for MCAS Tustin which maximizes the appeal of the site as a mixed use, master planned development and that includes the following qualities seeking to create results that are very special and worthy of the site's present and historical importance.

Policy 14.1 Promote new uses and design which will peacefully coexist with surrounding residences and businesses in Tustin and adjacent cities, minimizing impacts on noise, air quality, traffic, and other environmental features wherever possible.

Policy 14.2 Encourage a development pattern that offers a connectedness between buildings and uses, and has a strong sense of place through architectural style and creative landscape design.

Policy 14.3 Encourage a mixture of uses that enable people living or working on the site to choose to meet a significant part of their daily needs within the site.

Policy 14.4 Implement the balanced reuse plan that responds to community needs but which does not drain City resources. Wherever possible, tax revenues generated by uses on the site should offset the costs of public services.

Policy 14.5 Promote high quality architecture, landscaping, signage, open space design, circulation patterns, and landscape patterns distinct from surrounding areas.

Policy 14.6 Encourage the distinguished history of the Base to be preserved in one or more locations on site.

Policy 14.7 Promote uses and institutions which will accommodate and attract 21st Century jobs and technologies.

Policy 14.8 Encourage uses that benefit broader community's needs and which are balanced with development that is compatible with the Tustin community.

Policy 14.9 Ensure that land and water are clean and safe to use and that other environmental considerations are taken into account during design.

Policy 14.10 Promote a successful transition from military to civilian use that reasonably satisfies the public interests at local, countywide, regional, state and federal levels consistent with the need for any reuse plan to be fiscally sound and to foster economic development.

Policy 14.11 Strategically place development in a manner responsive to requirements for hazardous material cleanup, circulation and infrastructure capacity, and market absorption.

Housing Element

Goal 1 Provision of an adequate supply of housing to meet the need for a variety of housing types and the diverse socio-economic needs of all community residents commensurate with the City's identified housing needs in the RHNA allocation.

Policy 1.1 Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.

Policy 1.4 Initiate development permit and zoning code streamlining strategies to encourage and expedite residential development (i.e. accessory dwelling units, affordable housing units, and investments in existing buildings) to reduce and eliminate regulatory barriers.

Policy 1.5 Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for the construction of higher density housing, affordable housing, and mixed-use development (the vertical and horizontal integration of commercial and residential uses) in proximity to employment opportunities, community facilities and services, and amenities.

Goal 2 **Promote fair housing opportunities for all people regardless of their special characteristics as protected under state and federal fair housing laws.**

Policy 2.3 Promote the dispersion and integration of housing for low- and very-low income families throughout the community.

Policy 2.6 Promote fair housing opportunities by supporting the continuation of policies that require relocation assistance, and/or to provide incentives and assistance for purchase of the units by low- and moderate-income households.

Goal 5 **Ensure that new housing is sensitive to the existing natural and built environment.**

Policy 5.1 Prioritize sustainable housing developments in proximity to services and employment centers thereby enabling the use of public transit, walking or bicycling and promoting an active lifestyle.

Policy 5.2 Promote green building practices for more sustainable energy conservation measures in the construction of new housing or rehabilitated units.

Program 1.2a Program 1.2a provides that the City will amend its Zoning Code to remove subjective design guidance in TCC Section 9272 (Design Review) and adopt new Objective Design Standards (ODS) to ensure that the City can provide clear guidance regarding project design, in order to streamline the development of high-quality residential development. The ODS would include provisions consistent with the requirements of Senate Bill (SB) 35. Program 1.2a is anticipated to be complete in October 2024.

Program 1.2c Program 1.2c directs the City to develop parking standards to facilitate residential housing production as part of mixed-use developments, adaptive reuse projects, and new residential developments. The program provides that parking displaced as a result of redevelopment may be replaced with vertical parking structures, as needed, to provide required parking. Additionally, the parking standards would incentivize creative parking strategies such as parking credits for transit rich development, and allowance of parking structures and parking lifts, by right and subject to the ODS.

Circulation Element

Goal 1 **Preserve the low-density quality of Tustin's existing single-family neighborhoods while permitting compatible multi-family development to meet regional housing needs where best suited from the standpoint of current development, accessibility, transportation and public facilities.**

Policy 1.2 Develop and implement circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians and bicycle lanes or trails that are adjacent or off-road.

Policy 1.3 Coordinate roadway improvements with applicable regional, state and federal transportation plans and proposals.

Policy 1.10 Require that proposals for major new developments include a future traffic impact analysis which identifies measures to mitigate any identified project impacts.

Policy 1.11 Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.

Policy 1.13 Minimize effects of transportation noise wherever possible so as to comply with the Noise Element.

Policy 1.15 Ensure construction of existing roadways to planned widths, as new developments are constructed.

Policy 1.16 Continue to require dedication of right-of-way and construction of required public improvements on streets adjacent to construction projects at the developer's expense.

Goal 2 **Provide for a truck circulation system that provides for the effective transport of commodities while minimizing the negative impacts throughout the City.**

Goal 3 **Support development of a network of regional transportation facilities which ensure the safe and efficient movement of people and goods from within the City to areas outside its boundaries, and which accommodate the regional travel demands of developing areas outside the City.**

Goal 4 **Maximize the efficiency of the circulation system through the use of transportation system management and demand management strategies.**

Goal 5 **Support development of a public transportation system that provides mobility to all City inhabitants and encourages use of public transportation as an alternative to automobile travel.**

Policy 5.2 Require new development to fund transit facilities, such as bus shelters and turn-outs, where deemed necessary to meet public needs arising in conjunction with development.

Policy 5.5 Promote new development that is designed in a manner which facilitates provision or expansion of transit service and provides non-automobile circulation within the development.

Goal 6 **Increase the use of non-motorized modes of transportation.**

Policy 6.1 Promote the safety of pedestrians and bicyclists by adhering to uniform standards and practices, including designation. of bicycle lanes, off-road bicycle trails, proper signage, and adequate sidewalk, bicycle lane, and off-road bicycle trail widths.

Policy 6.2 Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.

Policy 6.14 Require new development to dedicate land and fund improvement of bicycle, pedestrian and equestrian facilities, where deemed necessary to meet public needs arising in conjunction with development.

Conservation, Open Space, and Recreation Element

Goal 1 **Reduce air pollution through proper land use, transportation and energy use planning.**

Policy 1.1 Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.

Policy 1.3 Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.4 Develop neighborhood parks near concentrations of residents to encourage pedestrian travel to the recreation facilities.

Policy 1.6 Cooperate and participate in regional air quality management plans, programs, and enforcement measures.

Goal 2 **Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.**

Policy 2.1 Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2 Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.12 Implement land use policy contained in the Land Use Element toward the end of achieving jobs/housing balance goals.

Goal 3 **Reduce particulate emissions to the greatest extent feasible.**

Policy 3.1 Adopt incentives, regulations, and/or procedures to minimize particulate emissions from paved and unpaved roads, agricultural uses, parking lots, and building construction.

Goal 4 **Reduce emissions through reduced energy consumption.**

Policy 4.1 Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

Goal 5 **Protect water quality and conserve water supply.**

Policy 5.2 Protect groundwater resources from depletion and sources of pollution.

Policy 5.3 Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.

Policy 5.5 Protect water quality by responsible agency support of enforcement of water quality standards for water imported into the County, and to preserve the quality of water in the groundwater basin and streams.

Goal 7 **Conserve and protect natural plant and animal communities.**

Policy 7.2 Conserve important plant communities and wildlife habitats, such as riparian areas, wildlife movement corridors, wetlands, and significant tree stands through the practice of creative site planning, revegetation, and open space easements/dedications.

Policy 7.4 Require new development to revegetate graded areas.

Goal 8 **Conserve and protect significant topographical features, important watershed areas, resources, and soils.**

Policy 8.2 Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements.

Policy 8.3 Encourage the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems.

Policy 8.5 Review applications for building and grading permits, and applications for subdivision for adjacency to, threats from, and impacts on geological hazards arising from seismic events, landslides, or other geologic hazards such as expansive soils and subsidence areas.

Policy 8.10 Mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, and sensitive habitats through the environmental review process.

Goal 10 **Reduce solid waste produced within City.**

Policy 10.2 Ensure that the City diverts from landfills a maximum of 50% of the solid waste generated in the City as required by the California Integrated Waste Management Board.

Goal 11 **Conserve energy resources through use of available energy technology and conservation practices.**

Goal 12 **Maintain and enhance the City's unique culturally and historically significant building sites or features.**

Policy 12.2 Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.

Goal 13 **Preserve Tustin's archaeological and paleontological resources.**

Policy 13.1 Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.

Policy 13.2 Require mitigation measures where development will affect archaeological or paleontological resources.

Goal 14 **Encourage the development and maintenance of a balanced system of public and private parks, recreation facilities, and open spaces that serves the needs of existing and future residents in the City of Tustin.**

Policy 14.8 Encourage and, where appropriate, require the inclusion of recreation facilities and open space within future residential, industrial and commercial developments.

Policy 14.12 Ensure that the City's laws and related implementation tools relating to park dedication and development (e.g., ordinances, regulations, in-lieu fee schedules, etc.) reflect current land and construction costs, and are, in fact, providing adequate park land and facilities concurrent with population growth.

Goal 17 **Operate and maintain existing and future parks and recreation facilities so they are safe, clean, and attractive to the public; and preserve, protect, and enhance both existing and potential natural recreation areas to ensure that long-term public investments and values are not unreasonably preempted, compromised, or prevented by neglect or short-term considerations.**

Policy 17.2 Require park designs (including landscape treatments, buildings, irrigation, etc.) that are durable, reasonably standardized, and economical to maintain.

Goal 18 **Ensure that the recreational goals and policies are pursued and realized in an organized, incremental, and cost-effective manner and consistent with the City of Tustin's financial resources and legal authorities and the appropriate responsibilities of other agencies, the private sector, and individual and group users.**

Policy 18.5 Conserve the City's Quimby Act authority by utilizing, wherever practicable, the City's broad powers to enact and enforce its General Plan, Specific Plan(s), Redevelopment Plan(s), subdivision ordinance and Zoning Ordinance to secure public and private recreation sites, open space, trails, and other related land use objectives of community planning significance.

Public Safety Element

Goal 1 **Reduce the risk to the community's inhabitants from flood hazards.**

Policy 1.5 Require detention basins as a flood control measure where applicable to reduce the risk from flood hazards.

Goal 3 **Reduce the risk to the community from geologic and seismic hazards.**

Policy 3.1 Require review of soil and geologic conditions by a State-Licensed Engineering Geologist to determine stability prior to the approval of development where appropriate.

Policy 3.5 Ensure that structures for human occupancy, critical structures, and vital emergency facilities are designed to minimize damage from potential geologic/seismic hazards and avoid functional impairment.

Goal 4 **Reduce the risk to the community's inhabitants from exposure to hazardous materials and wastes.**

Policy 4.3 Transportation of hazardous waste will be minimized and regulated where possible to avoid environmentally sensitive areas and populated, congested, and dangerous routes.

Goal 5 **Reduce the risk to the community's inhabitants from fires or explosions.**

Policy 5.4 Enforce building code requirements that assure adequate fire protection.

Goal 6 **Stabilize demand for law enforcement services.**

Policy 6.1 Provide appropriate levels of police protection within the community.

Policy 6.5 Promote the use of defensible space concepts (site and building lighting, visual observation of open spaces, secured areas, etc.) in project design to enhance public safety.

Noise Element

Goal 2 **Incorporate noise considerations into land use planning decisions.**

Policy 2.3 Use noise/land use compatibility standards as a guide for future planning and development.

Policy 2.4 Review Modified Projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise.

Policy 2.5 Require new residential developments located in proximity to existing commercial/industrial operations to control residential interior noise levels as a condition of approval.

Policy 2.6 Require that commercial uses developed as part of a mixed-use project (with residential) not be noise intensive. Design mixed-use structures to prevent transfer of noise from the commercial to the residential use.

Policy 2.7 Require new commercial/industrial operations located in proximity to existing or proposed residential areas to incorporate noise mitigation into project design.

Goal 3 Develop measures to control non-transportation noise impacts.

Policy 3.1 Implement a review process of Tustin's noise ordinance, and City policies and regulations affecting noise.

Policy 3.2 Minimize the impacts of construction noise on adjacent land uses through limiting the permitted hours of activity.

Policy 3.3 Require City departments to observe state and federal occupational safety and health noise standards.

Growth Management Element

Goal 2 Ensure adequate transportation facilities are provided for existing and future inhabitants of the City.

Policy 2.1 Require that all new development pay its share of the street improvement costs associated with the development, including regional traffic mitigation.

Policy 2.5 All new development shall be required to establish a development phasing program which phases approval of development commensurate with required improvements to roadway capacity. The Phasing Plan shall include an overall buildout development plan which can demonstrate the ability of the infrastructure to support the planned development.

Policy 2.6 Development phasing for new projects shall be a component of the development review and entitlement process and shall be approved prior to issuance of building or grading permits.

Tustin City Code

The City's Municipal Code Chapter 2, Z*oning*, regulates the location and uses of specific uses within the city, including residences, businesses, trades, industries, use of buildings, structures, and land, the location, height, bulk, and size of buildings and structures. The zoning standards are implemented to:

- Encourage the most appropriate use of land.
- Conserve and stabilize property value.
- Provide adequate open spaces for light and air and to prevent and fight fires.
- Prevent the undue concentration of population.
- Lessen congestion on streets and highways.
- Promote the health, safety, and the general welfare of the people, all as part of the General Plan of the City.

Tustin Legacy Specific Plan

As stated within the TLSP, "A key function of the Specific Plan is to streamline future detailed planning and environmental review procedures related to development and reuse of the Plan area. The Plan and accompanying Supplemental Environmental Impact Report (SEIR) provides the necessary regulations and environmental documentation so that future development and reuse proposals in conformance with this Plan

may proceed without a requirement for new or additional environmental documentation." The TLSP includes four chapters; 1) Introduction, 2) The Plan, 3) Regulating Code, and 4) Administration and Implementation. Chapter 2, The Plan, provides the vision for the larger TLSP area. Chapter 3, Regulating Code, includes the specific development standards and allowed uses for each individual planning area within the TLSP.

The 2017 TLSP includes seven objectives for the future development of the specific plan area:

Objective 1 Implement a revised land use and urban design plan for the community that weaves the existing development into an updated comprehensive vision for achieving a better balance of residential, commercial, and employment uses, well connected by a variety of transportation modes, parks, and open space.

Objective 2 Reposition the remaining undeveloped lands in Planning Area 15 to be transit oriented in terms of site design, mixing and increased intensity of land uses, walkability, location and design of public spaces, and direct pedestrian access to the adjacent Tustin Metrolink Station.

Objective 3 Reposition the remaining undeveloped land in Planning Areas 8, 13, and 14 to become a new mixed-use urban center designed around a "Main Street" that connects to the adjacent Tustin Legacy Park and The District.

This large area would also include a range of commercial recreation, cultural, and entertainment uses within and adjacent to the Tustin Legacy Park.

Objective 4 Establish new zoning designations for mixed-use development that provides flexibility for both horizontal and vertical mixed-use projects in Neighborhoods D and G through Mixed-Use Urban and Mixed-Use TOD land use designations.

Objective 5 Preserve the Tustin Legacy Park concept from the Adopted Specific Plan, and provide additional design direction related to trails, recreation activities, integration with adjacent development, and park design features.

Objective 6 Implement an updated mobility plan for Tustin Legacy that ensures a well-connected system of roadways, pedestrian paths, bicycle routes, and bus and shuttle routes that provide safe and convenient access to uses within Tustin Legacy, the adjacent Metrolink Station, and other offsite destinations.

Objective 7 Maintain the existing nonresidential land use/trip budget total for Tustin Legacy, while allowing for the reallocation of trips between certain neighborhoods, based on the revised mix of land uses for the remaining lands owned by the City of Tustin.

Tustin Legacy Development and Disposition Manual

The Development and Disposition Manual (Development Manual) provides a recommended framework to implement the City of Tustin's vision for the redevelopment of the former MCAS Tustin, as identified in the Specific Plan, in compliance with all federal, state, and local regulations. This document focuses on the calculated conveyance and development of City-owned property at Tustin Legacy and seeks to provide flexibility in adapting to changing market conditions, and land and infrastructure constraints. It provides guidance in making property disposition decisions by the City which acts in the capacity of Executive Developer for Tustin Legacy. The latest updated manual was prepared in 2022.

5.4.3 ENVIRONMENTAL SETTING

5.4.3.1 Existing Land Uses

Tustin Legacy Specific Plan Area

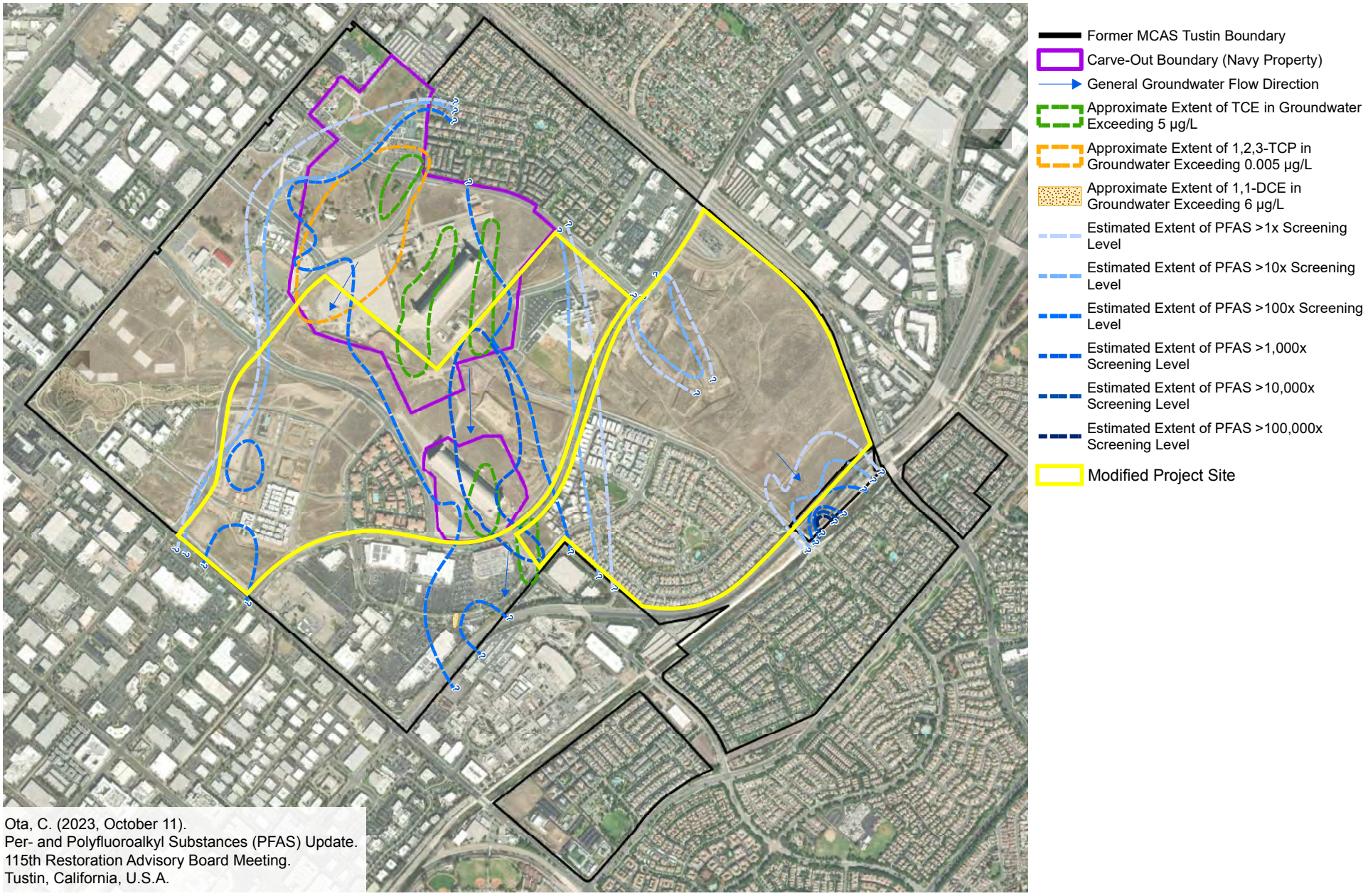
The TLSP area contains existing commercial, office, institutional, and residential development, parks, and vacant land. Approximately 1,035 acres have been developed or transferred to other land owners. The remaining portion of the TLSP area encompasses 565 acres, of which 480 of those acres are City-controlled and approximately 85 acres are not. As of March 2024, 3,856 residential units have been entitled/constructed, 1.6 million square feet (SF) of commercial space has been developed, and over 90 acres of park space have been dedicated and improved. A large portion of the western TLSP area has been transferred and utilized as institutional space for schools, the Army Reserve Center, Village of Hope, OC Animal Care Shelter, and a children and family care shelter operated by County of Orange Social Services. In addition to these uses, the South Orange County Community College District has a small campus with approximately 14,680 square feet of educational uses—the first phase of a larger mixed-use educational campus referred to as the Advanced Technology & Education Park (ATEP). See Figure 5.4-1, *TLSP Existing Land Use*.

Projects that are active or were recently completed at the time of the release of this Draft Supplemental Environmental Impact Report (SEIR) include:

- The Landing (nearly complete): 400 for sale single family and townhomes for sale over 25 acres in Neighborhood D South;
- Alley Grove Promenade (complete): 2.8-acre open space pedestrian walkway/multimodal connection from Armstrong Avenue to Tustin Ranch Road through Neighborhood D South;
- Confluent ENA: 264 units for senior congregate care over 6 acres in Neighborhood D South;
- Bark Barracks (under construction): dog park;
- Neighborhood D South Infrastructure (under construction): grading, utilities, road improvements to support Confluent ENA, Legacy Park Phase 2, Armstrong Avenue Pedestrian Bridge, and South Hangar power hookups;
- Armstrong Avenue Pedestrian Bridge (planned): Concrete edge girder w/wood accents and lighting design to provide connection from Legacy Park Phase 1 to Phase 2;
- Legacy Park Phase 2 (under construction): 5 acres of park space in Neighborhood D South;
- ATEP Additions (under construction): Irvine Valley College IDEA building complete and Saddleback at ATEP, Goddard School, and Advantech North America HQ opening or near completion in Neighborhood A; and
- Legacy Magnet Academy: 40-acre middle school and high school, at the southwest corner of Tustin Ranch Road and Valencia Avenue in Neighborhood D (North) was completed in 2020.

On November 7, 2023, a fire erupted in Navy Hangar 28 (of Neighborhood C, PA 6). The Navy hangar was destroyed, and as of the date of this document, it has been demolished and debris removal will occur soon. Notably, the fire was contained to Navy Hangar 28, such that Navy Hangar 29 (of Neighborhood D, PA 8) was not impacted, and remains unaltered.

Hazardous Cleanup Sites



Ota, C. (2023, October 11).
Per- and Polyfluoroalkyl Substances (PFAS) Update.
115th Restoration Advisory Board Meeting.
Tustin, California, U.S.A.

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5.4.3.2 Existing General Plan and Zoning Designation

The TLSP area, including the Modified Project site, has a General Plan land use designation of TLSP and a zoning designation of SP 1 – Tustin Legacy, as shown in Figure 3-5, *Existing General Plan Land Use*, and Figure 3-6*, Existing Zoning*.

The Land Use Plan for TLSP has been further divided into 13 separate Planning Areas (PAs) and several sub-planning areas, as shown in Figure 3-7, *Existing TLSP Land Use Plan*. Neighborhood D includes PAs 8, 13, and 14 and the portion of Neighborhood G within the Modified Project includes PA 15. Each PA has been assigned a land use designation. PAs categorize the use and development regulations found within the TLSP. The Land Use Plan PA land use designations include Mixed-Use Transit, Mixed-Use Urban, Commercial, Commercial/Business, Residential, Park, Tustin Legacy Park Overlay, Transitional/Emergency Housing, Education Village, and Public Street Right-of-Way (ROW). Specific designations of the Modified Project sites are discussed further below.

The Modified Project site's existing TLSP Neighborhood designations are shown in Figure 3-4, *TLSP Neighborhoods*. Table 3-2, *Specific Plan Amendment Summary*, lists the TLSP designations.

Neighborhood D North/Planning Area 8

Neighborhood D North is designated as Mixed-Use Urban with a portion covered by the Tustin Legacy Park Overlay. The TLSP states that the Mixed-Use Urban designation is intended to provide flexibility for a range of uses including hotel, commercial retail, commercial entertainment, public recreation, high school, and residential. The Tustin Legacy Park Overlay designation is intended to be a linear park extending from the corner of PAs 9-12 at Barranca Parkway and Red Hill Avenue in a diagonal direction, to Edinger Avenue in PA 15, complete with a variety of landscape settings such as urban hardscapes and natural softscapes. Neighborhood D North currently provides for a maximum development of 1,547,690 SF nonresidential use (no residential).

Neighborhood D South/Planning Areas 13 & 14

Neighborhood D South is designated as Mixed-Use Urban with a portion of PA 13 covered by the Tustin Legacy Park Overlay. The TLSP states that the Mixed-Use Urban designation is intended to provide flexibility for a range of uses including hotel, commercial retail, commercial entertainment, public recreation, high school, and residential. According to the TLSP, Neighborhood D South currently provides for a maximum development of 1,672 dwelling units and 606,000 SF of nonresidential uses.

Neighborhood G/Planning Area 15

PA 15 is designated as Mixed-Use Transit with a portion covered by the Tustin Legacy Park Overlay. According to TLSP, the Mixed-Use Transit designation is intended to provide for transit-oriented, mixed-use developments with residential, office, commercial retail, and commercial service uses in a vertical or horizontal configuration. PA 15 is located across from the Tustin Metrolink Station and is envisioned as the transit-oriented, residential core of Tustin Legacy. Neighborhood G currently provides a development maximum of 2,814 dwelling units and 1,095,200 SF of nonresidential uses.

5.4.3.3 Hazardous Waste and Groundwater Remediation Sites

The Tustin Legacy Specific Plan encompasses the former Marine Corps Air Station Tustin, which closed in 1999. Since that time, hazardous waste remediation has been occurring across the site under the authority of the Department of Navy. Specifically, the environmental remediation activities at Tustin Legacy (former

MCAS Tustin) are handled by the BRAC (Base Realignment and Closure) Cleanup Team (BCT), comprised of the Department of the Navy, the Santa Ana Regional Water Quality Control Board and the CA Department of Toxic Substance Control (DTSC), and Restoration Advisory Board (RAB) (Orange County Grand Jury, 2020). These cleanup efforts have been heavily documented throughout various plans, agreements, and ongoing testing of the site. The TLSP works in tandem with the plans, policies, and regulations applicable to the hazardous sites within the TLSP, such that once the hazardous conditions of an area within the TLSP area are remediated to acceptable conditions (e.g., per the City's MOA with the Navy and DTSC), the area defaults to the approved land uses within the TLSP.

The following includes a summary of hazardous conditions of the TLSP area and remediation activities currently ongoing.

Ongoing MCAS Cleanup

A Federal Facilities Support Remediation Agreement (FFSRA) between the Navy and the DTSC is currently in place for the former MCAS Tustin, which governs the Navy's corrective action and response obligations under the Resource Conservation and Recovery Act and CERCLA (City of Tustin, 2023). The Navy is able to transfer property with ongoing environmental remediation once the system treating the environmental issue is Operating Properly and Successfully (OPS) for a three-year period. This means that the Navy can transfer property even with ongoing cleanup activities, as long as the remedy selected for that particular issue is in place and performing.

The difficulty over the last 10+ years with the Navy transferring property has been changing environmental standards, which have made OPS unobtainable. For example, in 2017 the State of California established a Maximum Contaminant Level (MCL) for 1,2,3 – trichloropropane (1,2,3-TCP) of .005 mg/l, when the previous MCL was 0.5 mg/l. This significant change in cleanup goals required the Navy to re-mobilize and re-sample several times, to ensure the existing treatment system was successfully remediating to the new 1,2,3-TCP cleanup goal.

The original Economic Development Conveyance (EDC) between the Navy and City governs how 1,153 acres of the 1,600-acre former MCAS Tustin was to be transferred to the City (the remaining acreage was conveyed directly to other entities and agencies) (City of Tustin, 2023). Of the 1,153 acres transferred to the City, 979 acres were deeded to the City in 2002. The remaining 174 of the 1,153 acres, which are not yet owned by the City, are under a Lease In Furtherance of Conveyance (LIFOC) between the Navy and the City. The LIFOC grants the City a lease on the remaining properties while the Navy undertakes additional environmental investigation and/or remediation per the FFSRA agreement.

The 174 LIFOC acres have been separated into eleven "carve out" areas throughout the former Navy base. Contaminants within the carve outs include trichloroethylene, trichloropropane, jet fuel, petroleum hydrocarbons, volatile organic compounds, metals, and polynuclear aromatic hydrocarbons. Additionally, asbestos-containing materials were identified in 77 former buildings onsite, and nonresidential buildings built before 1980 were assumed to contain lead-based paint. These conditions were identified in the FEIS/EIR, and subsequent CEQA documentation, as resulting in a less than significant impact after remediation of environmental contamination, per existing federal and state regulatory compliance.

Since 2002, nine of the eleven carve-outs have met OPS conditions and have been conveyed to the City. These nine carve out areas constitute approximately 60 of the total 174 LIFOC acres. Two of the eleven carve-outs, Carve Outs 5 and 6, have not yet met OPS conditions and remain under Navy management. Carve Outs 5 and 6 total approximately 114 acres.

Groundwater contamination is identified as occurring within several plumes that underly Carve Outs 5 and 6. Trichloroethylene, trichloropropane, and other chlorinated hydrocarbons were found in groundwater and

soil. Site remediation consists of pumping and treating groundwater, in-situ bioremediation, and monitored natural attenuation. Existing groundwater contamination sources are shown in Figure 5.4-2, *Hazardous Cleanup Sites*.

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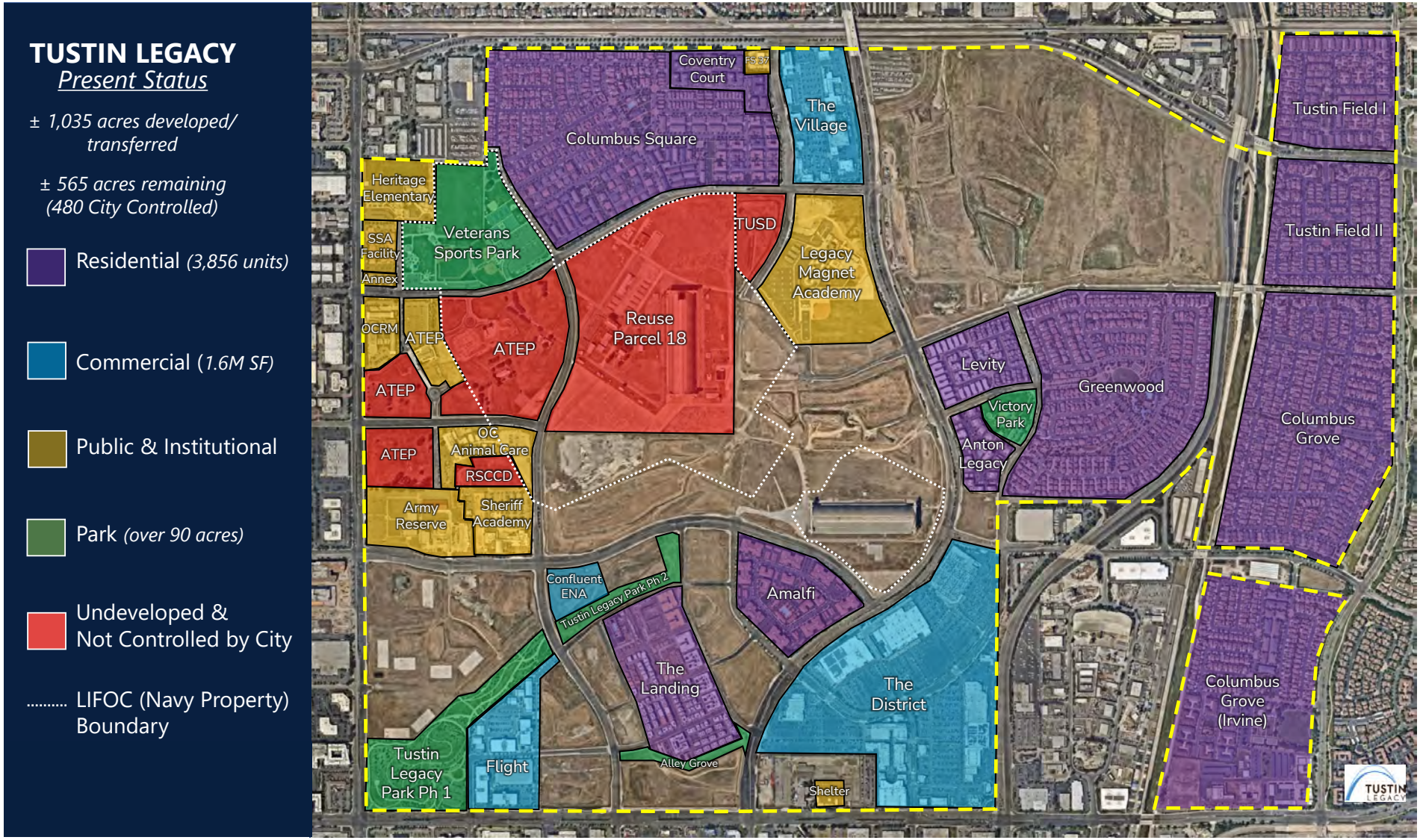
Tustin Legacy Present Status



Tustin Legacy Specific Plan Amendment SEIR
City of Tustin

Figure 5.4-2

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PFAS

Per- and polyfluoroalkyl substances (PFAS) are an emerging contaminant nationwide and worldwide. The State of California has been regulating PFAS in drinking water since 2018. The Navy is currently assessing PFAS impacts at Tustin Legacy with DTSC and RWQCB oversight. The recent emergence of PFAS has created a new contaminant that will require extensive research, sampling, and potentially a new treatment strategy. Any conveyances of areas currently impacted by PFAS will likely be delayed until more information on PFAS has been collected, as well as guidance is given from the Environmental Protection Agency (EPA) to the Department of Defense (DOD) and ultimately to the Navy.

Scientific studies have shown that ingestion of PFAS over time may be linked to harmful health effects (City of Tustin, 2024). The most common method of ingestion of PFAS is through contaminated drinking water. Drinking water at Tustin Legacy is supplied by the Irvine Ranch Water District from non-Tustin Legacy sources. The drinking water delivered to residences and businesses in Tustin does not contain any detectable levels of PFAS (IRWD, 2024).

Hangar Fire

The north hangar (Navy Hangar 28), located near Valencia Avenue and Armstrong Road in Neighborhood C, is currently owned by the Department of the Navy. The building sustained roof damage in October 2013 during a windstorm and was destroyed by a fire in November 2023. The portions of the building left standing have been demolished. The removal of demolition debris is in process.

The former MCAS Navy Hangar 28 incident has evolved since the fire began on November 7, 2023, and a four-phase response approach has been initiated (Orange County Health Care Agency, 2024). While the fire was contained to Neighborhood C, cleanup and monitoring efforts extend to the surrounding areas. Phase 1 included the fire response phase, which included fire suppression, debris removal, and application of water to asbestos containing materials (ACM) to reduce the amount of airborne fibers. The second phase, the phase currently taking place at the time of the drafting of this document, includes debris stabilization, which involves application of a soil sealant to debris, and removal of the hangar doors. The third stage is the maintain stabilization phase, which requires reapplication of soil sealant if monitoring exceedances occur. The final phase is remediation, which requires permitted remediation of ACM debris, such as potentially hauling contaminated soils offsite. Since phase one, monitoring has continued (24/7) around the north hangar and surrounding community, testing for particulate matter (PM), volatile organic compounds (VOCs), asbestos and metals has been ongoing. ACM testing is performed intermittently. There have been no detections of airborne asbestos during air monitoring/sampling conducted thus far. The hazard of potential asbestos exposure has been significantly reduced now that the fire has been extinguished and a sealant has been applied to the debris that remains at the incident site. A website has been created that is dedicated to communication of the hangar fire and ongoing cleanup activities: https://www.tustinca.org/1457/North-Hangar-Fire-Community-Resource-Page. The latest information regarding the status of the site can be found on the City's website.

5.4.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

LU-1 Physically divide an established community.

LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Initial Study (Appendix A) established that the Modified Project would not result in impacts related to Threshold LU-1; therefore, no further assessment of this threshold is required in this Draft SEIR.

5.4.5 METHODOLOGY

The analysis of land use consistency impacts considers whether the Modified Project would be inconsistent with (or conflict with) regional and local plans, policies, and regulations that are applicable to the Modified Project site, including the SCAG RTP/SCS, City of Tustin GP, TLSP, and City zoning code. Consistent with the scope and purpose of this SEIR, this discussion primarily focuses on those goals and policies that relate to avoiding or mitigating environmental impacts, and an assessment of whether any inconsistency with these standards creates a significant physical impact on the environment. Thus, a project's inconsistency with a policy is only considered significant if such inconsistency would cause significant physical environmental impacts (as defined by CEQA Guidelines Section 15382).

CEQA Guidelines Section 15125(d) requires that an EIR discuss inconsistencies with applicable plans that the decision-makers should address. A project need not be consistent with each and every policy and objective in a planning document. Rather, a project is considered consistent with the provisions of the identified regional and local plans if it meets the general intent of the plans and would not preclude the attainment of the primary goals of the land use plan or policy.

5.4.6 ENVIRONMENTAL IMPACTS

Summary of Impacts Associated with the Approved Project

The original MCAS Tustin Specific Plan FEIS/EIR determined that the project required amendments to the cities of Tustin and Irvine General Plans and Zoning Ordinances. The FEIS/EIR found that the intensification and change of land uses pursuant to the MCAS Tustin Specific Plan could create land use incompatibilities with surrounding land uses and internal incompatibilities within the project area. Mitigation measures were incorporated requiring the City of Tustin and the City of Irvine to amend their General Plan and Zoning Ordinance to be consistent with the project. The measures also require that the appearance of future development on the site is similar to other master planned areas adjacent to the specific plan area.

In 2001, the City of Tustin adopted a General Plan land use designation "MCAS Tustin Specific Plan," and the MCAS Tustin Specific Plan was adopted on February 3, 2003 (Ordinance 1257). As described previously, the MCAS Tustin Specific Plan established the zoning designations, development standards, and entitlement framework for future development in the Specific Plan area.

The 2017 SEIR analyzed the Approved Project's consistency with the Tustin General Plan, SCAG 2016–2040 RTP/SCS, and the Airport Environs Land Use Plan (AELUP) for John Wayne Airport. Overall, the SEIR determined that the Approved Project would be consistent with all applicable land use plans.

IMPACT LU-2: THE PROJECT WOULD NOT CAUSE A SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO A CONFLICT WITH ANY LAND USE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT.

Less than Significant With Mitigation.

The following analysis evaluates the Modified Project's consistency with the Tustin General Plan, SCAG 2016– 2040 RTP/SCS, and the Airport Environs Land Use Plan (AELUP) for John Wayne Airport through the context of proposed changes to the previously Approved Project. The analysis also evaluates consistency with the recently adopted SCAG 2024– 2050 RTP/SCS and updated City of Tustin General Plan Housing Element goals and policies, which were not evaluated previously under the 2017 SEIR.

SCAG Final 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), (Connect SoCal 2024)

SCAG strategies focus largely on implementing transit-oriented development and increasing the use of regional transit, encouraging development patterns and densities that reduce infrastructure costs, and providing a variety of housing types including affordable housing. The proposed SPA would implement SCAG strategies related to high-density, infill development, and improvement of the job/housing balance that is centered around public transit opportunities. The proposed SPA provides for reuse of an old military base within the center of an urbanized area. Development of the TLSP area would make efficient use of the existing circulation and utility infrastructure of the surrounding area. The Modified Project would allow for future development of additional residential uses within a mixed-use environment in which residents would benefit from the proposed onsite uses and nearby shopping, restaurant, and employment opportunities, which will reduce VMT while meeting regional housing goals.

The Notice of Preparation (NOP) was circulated for the Modified Project from March 5, 2024, to April 3, 2024. At the time of NOP circulation, the 2020-2045 RTP/SCS was the adopted plan for the SCAG region. As described below, a new RTP/SCS has been adopted by SCAG but has not yet been certified by the state. Therefore, for analysis purposes, goals and policies from both RTP/SCS have been evaluated in consistency with the Modified Project. Table 5.4-2 below describes consistency of the Project with the policies of the 2020-2045 SCAG RTP/SCS. As described, the Modified Project would be consistent with, and therefore not conflict with, the RTP/SCS.

Table 5.4-1: Consistency with SCAG's 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy Goals

Goal/Policy	2017 SEIR Approved Project Compliance[1]	Modified Project Compliance
RTP/SCS G1: Align the plan investments and policies with improving regional economic development and competitiveness.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.	**No Change.**
RTP/SCS G2: Maximize mobility and accessibility for all people and goods in the region. **RTP/SCS G3:** Ensure travel safety and reliability for all people and goods in the region. **RTP/SCS G4:** Preserve and ensure a sustainable regional transportation system. **RTP/SCS G5:** Maximize the productivity of our transportation system.	**Consistent.** The circulation network proposed by the Modified Project is designed to be consistent with the City of Tustin General Plan Circulation Element and prioritize multimodal travel. The Modified Project accommodates current and future bus service to the area as planned by the OCTA. A Metrolink transit plaza is located across from the project area on the corner of Edinger Avenue and Jamboree Road. The Modified Project requires PA 15, across from the transit station, to be transit oriented in terms of scale, form, design, and mix of uses. A pedestrian bridge across Edinger Avenue would be the primary pedestrian and bicycle connection between the project area and the transit station. Vehicular access would be provided by additional street access along Edinger Avenue. As part of the development plan for the Modified Project, proposed infrastructure would include a pedestrian and vehicular circulation system, including roadways, landscaping, parks, street lighting, sidewalks, and pedestrian paths. The access and circulation plan is intended to efficiently integrate the Modified Project into the City's transportation network. As shown in Figure 3-7 of this DSEIR, the proposed system of vehicular streets would provide convenient, efficient, and safe access to uses within the project boundaries as well as to offsite destinations. Access into the project area is provided via entries along Barranca Parkway, Edinger Avenue, Jamboree Road, Red Hill Avenue, Armstrong	**No Change.** The Modified Project does not propose changes to the pedestrian and vehicular circulation system, including roadways, landscaping, parks, street lighting, sidewalks, and pedestrian paths currently planned under the Approved Project. Additionally, planned pedestrian access and connection would be maintained. The Modified Project would increase the number of maximum dwelling units allowed under PA 15/Neighborhood G. Future residential development would still be required to be consistent with existing standards for transit-oriented development in terms of scale, form, design, and mix of uses.

Goal/Policy	2017 SEIR Approved Project Compliance[1]	Modified Project Compliance
	Avenue, Tustin Ranch Road, Valencia Avenue, Warner Avenue, Victory Road, Harvard Avenue, and Moffett Drive. The circulation plan would connect Moffett Drive to Tustin Ranch Road. Access points proposed along the perimeter public streets would be coordinated with access to adjacent land uses. Internal circulation within each planning area would consist of smaller access roads or private streets serving development. The Modified Project maximizes the sustainability and efficiency of the project area's transportation network by modifying the layout and width of street rights-of-way to reflect proposed changes to permitted land uses. Although the proposed circulation system is not a dramatic departure from the Adopted Specific Plan, it better reflects the walkable nature of the Modified Project. Under the Modified Project, major arterial highways such as Tustin Ranch Road and Warner Avenue would still traverse the site, increasing connectivity in the area's existing roadway network. However, areas designated for walkable mixed-use development (PA 8, 13-14 and PA 15-A) are now proposed to have through-traffic distributed among a larger number of lower-traffic, lower-speed collector streets compared the Adopted Specific Plan. Implementation of this conceptual street layout would increase the safety of pedestrians and bicyclists.	
RTP/SCS G6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).	**Consistent.** The various sections of this DSEIR outline existing regulations, standard conditions, and mitigation measures that reduce and/or eliminate environmental and health-related impacts of the Modified Project, as applicable and feasible. For example, Section 5.1, *Air Quality*, of this DSEIR addresses air quality impacts, and Section 5.3, *Greenhouse Gas Emissions*, addresses climate impacts of the Modified Project. Note that even with mitigation incorporated, the project would	**No Change.** This DSEIR includes existing regulations, standard conditions, and mitigation measures that reduce and/or eliminate environmental and health-related impacts of the Modified Project, as applicable and feasible. The Modified Project would increase the maximum number of dwelling units allowed to be developed in Neighborhoods D and G under the TLSP. As a result, air quality and greenhouse gas (GHG) impacts are anticipated to be greater than

Goal/Policy	2017 SEIR Approved Project Compliance[1]	Modified Project Compliance
	result in significant and unavoidable impacts related to air quality and greenhouse gas emissions impacts. For the Modified Project's encouragement of active transportation modes, see the response to Tustin General Plan Circulation Element Goal 6, above.	previously analyzed under the Approved Project (see Section 5.1, *Air Quality*, and 5.3, *Greenhouse Gas Emissions*). Impacts to air quality and GHG would remain significant and unavoidable, predominately due to mobile-source emissions. However, future development would be required to prepare project-specific analyses to determine potential air quality impacts and incorporate mitigation as necessary to reduce impacts. Project-specific analyses would ensure that future projects would not result in health risk impacts on surrounding residents. As specified for the Approved Project, the Modified Project would continue to prioritize active modes of transportation and minimize VMT through the incorporation of mixed-use development. Therefore, the Modified Project would remain consistent.
RTP/SCS G7: Actively encourage and create incentives for energy efficiency, where possible.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.	**No Change.** For information about the Modified Project's impact on energy use, see Section 5.2, *Energy*, and for impacts on GHG, see Section 5.3, *Greenhouse Gas Emissions*, of this DSEIR.
RTP/SCS G8: Encourage land use and growth patterns that facilitate transit and active transportation.	**Consistent.** See response to RTP/SCS Goals G2 through G5.	**No Change.** See response to RTP/SCS Goals G2 through G5.
RTP/SCS G9: Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.	**No Change.**

Notes:
[1] "Modified Project" refers to the 2017 TLSP project that has since been approved. "Adopted Specific Plan" refers to the 2013 TLSP that was previously adopted prior to approval and implementation of the 2017 TLSP.
Sources: SCAG 2020-2045 RTP/SCS (Connect SoCal 2020) (Southern California Association of Governments, 2020);Tustin Legacy Specific Plan Amendment Supplemental Environmental Impact Report (Placeworks, 2017)

SCAG Final 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), (Connect SoCal 2024)

As defined under Code Regs. tit. 14 § 15126.2 "the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published". The Notice of Preparation, included as Appendix A to this SEIR, was circulated for public review from March 4, 2024, to April 3, 2024, and set the environmental baseline for the Modified Project. As described previously, SCAG is required by federal and state law to prepare and update the RTP/SCS every four years. Connect SoCal, the 2024-2050 RTP/SCS, was approved on April 4, 2024. Although the 2024 RTP/SCS was approved after the environmental baseline was set for the Project, Table 5.4-2 below lists applicable strategic policies included in the updated 2024-2050 RTP/SCS that the Modified Project would be consistent with. As described above and in Table 5.4-2, the Modified Project would implement SCAG strategies related to high-density, infill development, and improvement of the job/housing balance that is centered around public transit opportunities consistent with Connect SoCal Policies.

Table 5.4-2: Project Consistency with 2024 SCAG Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy Policies

2024 Connect SoCal Strategy Policy	Modified Project Consistency with Policy
Complete Streets	
Support implementation of Complete Streets demonstrations (including those addressing curb space management) to accommodate and optimize new technologies and micromobility devices, first/last mile connections to transit and last-mile deliveries	**Consistent.** The Project does not currently propose any development or roadway improvements. Roadway improvements and transit needs would be determined at the time a development project is proposed, and would coordinate with applicable regional, state, and federal transportation parties, as necessary. Future projects under the proposed Modified Project would be required to implement the TLSP Mobility Plan (Section 2.3 of the TLSP) that provides for the needs of pedestrians, bicyclists, motorists, and transit users. Future projects would also be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2).
Support community-led Complete Streets plans and projects, including those that take into account how to mitigate or adapt to climate change impacts (e.g., extreme heat)	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Transit and Multimodal Integration	
Increase multimodal connectivity (e.g., first/last mile transit and airport connections), which includes planning for and developing mobility hubs throughout the SCAG region	**Consistent.** The TLSP includes a Mobility Plan and transit-priority areas based on the local OCTA and Metrolink transit systems. The Project site is located near commercial, retail, and office uses. Additionally, as described in Section 5.8, *Transportation*, the Modified Project is located near established public transit and would promote an active lifestyle. The Modified Project would continue to implement the existing Mobility Plan and transit goals.
Through land use planning, support residential development along high-frequency transit corridors and around transit/rail facilities and centers	**Consistent.** Under the TLSP, the remaining undeveloped lands in Planning Area (PA) 15 are planned to be transit oriented in terms of site design, mixing and increased intensity of land uses, walkability, location and design of public spaces, and direct pedestrian access to the adjacent Tustin Metrolink Station. Future residential development under the Modified Project would be consistent with the established design objectives of PA 15. Additionally, the Modified Project would continue to implement the adopted Mobility Plan within the TLSP as the

2024 Connect SoCal Strategy Policy	Modified Project Consistency with Policy
	Modified Project areas continue to be built out. Additionally, as described in Section 5.8, *Transportation*, the Modified Project is located near established public transit and would promote an active lifestyle.
Expand the region's networks of bicycle and pedestrian facilities. This includes creating more low stress facilities, such as separated bikeways and bike paths, slow streets, and open streets	**Consistent.** The Project does not currently propose any development or roadway improvements. Roadway improvements and transit needs would be determined at the time a development project is proposed, and would coordinate with applicable regional, state, and federal transportation parties, as necessary. Future projects under the proposed Modified Project would be required to implement the TLSP Mobility Plan (Section 2.3 of the TLSP) that provides for the needs of pedestrians, bicyclists, motorists, and transit users. Future projects would also be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2).
Safety	
Work with local, state and federal partners to advance safer roadways, including reduced speeds to achieve zero deaths and reduce GHGs	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Priority Development Areas	
Support the development of housing in areas with existing and planned infrastructure and availability of multimodal options, and where a critical mass of activity can promote location efficiency	**Consistent.** The Regional Housing Needs Assessment (RHNA) is mandated by State Housing Law as part of the periodic process of updating local housing elements of the General Plan. On November 7, 2019, SCAG's Regional Council voted to approve the Draft RHNA Methodology. The approved draft methodology allocated RHNA "fair share" to various jurisdictions based on several variables, including access to job and transit (Southern California Association of Governments, 2020). At the regional level, SCAG planned for future housing growth with a concentration in areas that have existing and planned infrastructure and availability of multimodal options through their "fair share" allocations. The Modified Project is proposed to make the TLSP consistent with the certified 2021-2029 Housing Element, which was prepared to accommodate the City's 6th Cycle RHNA allocation. Therefore, the Modified Project supports SCAG's regional efforts to develop housing in existing and planned infrastructure and availability of multimodal options through implementation of their State Housing Law responsibilities.
Housing the Region	
Provide technical assistance for jurisdictions to complete and implement their housing elements and support local governments and Tribal Entities to advance housing production	**Consistent.** The Project is being proposed pursuant to the certified HEU, which was prepared to accommodate the City's RHNA, as delegated by SCAG. The City will continue to partner with SCAG and other planning organizations in fulfillment of City and regional goals.
Identify and pursue partnerships at the local, regional, state and federal levels to align utility, transit and infrastructure investments with housing development and equitable outcomes across the region	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Sustainable Development	
Research the availability of resources that can support the development of water	**Consistent.** The Modified Project is proposed pursuant to the City's HEU. No development is proposed as part of the Modified Project. The HEU

2024 Connect SoCal Strategy Policy	Modified Project Consistency with Policy
and energy-efficient building practices, including green infrastructure	Goal 5 states "Ensure that new housing is sensitive to the existing natural and built environment." Several policies are included to support this goal, including requirements for sustainable development and energy conservation. All future projects proposed within the Project site would be required to comply with the City's goals, policies, and programs. Compliance with the City's goals and policies would be verified during plan check. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Air Quality	
Coordinate with local, regional, state and federal partners to meet federal and state ambient air-quality standards and improve public health	**Consistent.** As described in Section 5.1, *Air Quality*, particulate emissions would mostly be derived from mobile source emissions. Future development would continue to prioritize the implementation of multimodal transportation to minimize mobile source emissions from the TLSP area. See Response to RTP/SCS G6. All future projects would be required to comply with all relevant State, regional, and local regulations and policies for reducing particulate emissions.
Clean Transportation	
Support the deployment of clean transit and technologies to reduce greenhouse gas emissions as part of the CARB innovative clean technology (ICT) rule	**Consistent.** The CARB innovative clean technology (ICT) rule requires all public transit agencies to gradually reduce fleet vehicle tailpipe emissions and encourages them to provide innovative first and last-mile connectivity and improved mobility for transit riders. Under the TLSP, the remaining undeveloped lands in Planning Area (PA) 15 are planned to be transit oriented in terms of site design, mixing and increased intensity of land uses, walkability, location and design of public spaces, and direct pedestrian access to the adjacent Tustin Metrolink Station. Future residential development under the Modified Project would be consistent with the established design objectives of PA 15. Additionally, the Modified Project would continue to implement the adopted Mobility Plan within the TLSP as the Modified Project areas continue to be built out. Additionally, as described in Section 5.8, *Transportation*, the Modified Project is located near established public transit and would promote an active lifestyle.
Natural and Agricultural Lands Preservation	
Work with implementation agencies to support, establish or supplement voluntary regional advance mitigation programs (RAMP) for regionally significant transportation projects to mitigate environmental impacts, reduce per-capita VMT and provide mitigation opportunities through the Intergovernmental Review Process	**Consistent.** As discussed in Section 5.8, *Transportation,* the Project would result in a less than significant impact on VMT. This is due to the mixed-use nature of the Modified Project area. The Modified Project area is located near major transit hubs and combines commercial and residential land uses within walking distance to one another in order to facilitate walkability and reduce reliance on private vehicles.
Continue efforts to support partners in identifying priority conservation areas—including habitat, wildlife corridors, and natural and agricultural lands—for permanent protection	**Consistent.** As previously determined through the 2001 FEIS/EIR, development of the TLSP area would result in potential impacts to pond turtles and jurisdictional waters. As such, Mitigation Measures Bio-1 through Bio-4 were incorporated and require ongoing implementation to mitigate potential impacts to pond turtles and jurisdictional waters. As determined in Section 5.4, *Biological Resources*, of the Initial Study prepared for this DSEIR (see Appendix A), the Modified Project would not result in any new impacts to habitat, wildlife corridors, or natural lands. Further Mitigation Measure Bio-5 was included to require surveys for future development projects to ensure additional impacts would not occur, and/or would be mitigated appropriately, based on site conditions at the time of proposed development.

2024 Connect SoCal Strategy Policy	Modified Project Consistency with Policy
Support the integration of nature-based solutions into implementing agency plans to address urban heat, organic waste reduction, protection of wetlands, habitat and wildlife corridor restoration, greenway connectivity and similar efforts	**Consistent.** See above regarding protection of biological resources. As of July 1, 2021, the City of Tustin offers all residents the ability to recycle food scraps by placing them in their green waste cart. Historically, this cart has been used for yard trimmings only. The waste service provider takes all organic material to their composting facility to be turned into soil amendment. Future residential projects implemented through TLSP would also be provided organic waste composting services.
Climate Resilience	
Develop partnerships and programs to support local and regional climate adaptation, mitigation and resilience initiatives	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Collaborate with partners to foster adoption of systems and technologies that can reduce water demand and/or increase water supply, such as alternative groundwater recharge technologies, stormwater capture systems, urban cooling infrastructure and greywater usage systems	**Consistent.** Future projects would be required to implement water-efficient landscaping and water conserving appliances pursuant to Section 9701 of Article 9, Chapter 7 of the City of Tustin Municipal Code. Compliance would be reviewed by the City during the permitting process. Additionally, development and construction of the Project site would require preparation and adherence to SWPPP and WQMP (PPP HYD-1 and -2). Therefore, development of the site would not deplete or pollute groundwater resources. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Workforce Development	
Provide technical assistance to help local jurisdictions realize their economic and workforce-development goals	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Encourage the growth of, and equitable access to, living-wage jobs throughout the region	**Consistent.** The Modified Project does not propose any development. The TLSP includes a variety of land uses, including commercial and institutional, which would facilitate new employment opportunities within a variety of sectors such as business, education, and retail.

Source: Southern California Association of Governments (SCAG) 2024 Connect SoCal Regional Transportation Plan/ Sustainable Communities Strategy

City of Tustin General Plan (and 2021-2029 Housing Element Update)

Table 5.4-3 demonstrates the Modified Project's relationship with goals and policies in the Tustin General Plan. This analysis primarily relies on goals, but also evaluates the project's consistency with individual policies that pertain to the project area specifically.

Table 5.4-3: Consistency with Relevant General Plan Goals and Policies

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Land Use Element – Goals		
Goal 1: Provide for a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City services.	**Consistent.** The 2017 Modified Project allowed a broad range of residential product types and other land uses, including educational, retail, commercial/business, entertainment, and recreational uses. The 2017 Modified Project revised the mix of these uses precisely to better respond to market conditions and community needs.	**No Change.** The Modified Project would continue to allow for future development of a broad range of residential product types and other land uses.
Policy 1.1 Preserve the low-density quality of Tustin's existing single-family neighborhoods, while permitting compatible multi-family development to meet regional housing needs where best suited from the standpoint of current development, accessibility, transportation and public facilities.	*Not previously included.*	**Consistent.** During the Housing Element process, the City identified the Modified Project site as a suitable site for rezoning to allow higher density housing. The Project would include a SPA of the Modified Project site to allow for additional future development of 2,211 units housing units (not including density bonus units), consistent with the City's certified 2021-2029 Housing Element. The allowed densities under this Project would provide for a variety of housing types and diverse socio-economic needs.
Policy 1.7 As part of the City's attraction to business and industry, provide adequate sites to house future employees.	*Not previously included.*	**Consistent.** Section 5.6, *Population and Housing*, of this DSEIR evaluates the Modified Project's impact on jobs-housing balance. The Modified Project would reduce (improve) the jobs-housing ratio slightly by adding 4,970 residential units. Buildout of the Modified Project would result in a jobs-housing ratio of 2.08 while buildout of the Approved Project would result in a jobs-housing ratio of 2.76. The Modified Project would result in overall more balanced jobs-housing conditions within the TLSP area.
Policy 1.10 Ensure that the distribution and intensity of land uses are consistent with the Land Use Plan and classification system.	*Not previously included.*	**Consistent.** As part of the Modified Project, the TLSP Land Use Table would be revised to accommodate for the intensities approved in the City's updated General Plan Housing Element and as mandated by state density bonus law.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Goal 2: Ensure that future land use decisions are the result of sound and comprehensive planning.	**Consistent.** Specific plans act as a bridge between the General Plan and individual development proposals. Rather than allow ad-hoc development, circulation improvements, and public amenities, the Modified Project plans for these in a comprehensive manner. The plan contains maps, diagrams, development standards, and design guidelines that emphasize compatibility between development projects and between neighborhoods. The mix of allowable land uses in the Specific Plan area is aimed at allowing long-term, phased growth in Tustin while ensuring that each land use type is not overbuilt. The circulation system is designed to be a highly connective, multimodal network of roadways and trails that are appropriately designed and sized for the land uses they access.	**No Change.** The Modified Project proposes an SPA to meet existing demands based on State Housing law and current market conditions. The amended TLSP would continue to facilitate development in a planned and comprehensive manner.
Goal 3: Ensure that new development is compatible with surrounding land uses in the community, the City's circulation network, availability of public facilities, existing development constraints and the City's unique characteristics and resources.	**Consistent.** See response to Goal 2, above.	**No Change.**
Goal 4: Assure a safe, healthy and aesthetically pleasing community for residents and businesses.	**Consistent.** The 2017 Modified Project included development standards, regulations, infrastructure requirements, design guidelines, and implementation programs on which subsequent, project-related development are founded. The revised site layout, land use pattern, and circulation system proposed by the 2017 Modified Project addressed safety by creating a hierarchy of streets that differentiates between streets that are designed to provide through-traffic and those that access homes and businesses. Provisions in the Modified Project also require compliance with state and local regulations related to hazardous materials and demolition and remediation of decommissioned military facilities. The 2017 Modified Project promoted the health of existing and future residents by expanding the planned network of parks and open space to	**No Change.** The Modified Project would continue to implement the design guidelines previously adopted. Additionally, objective design standards would be incorporated in the TLSP through the SPA to meet the goals of the 2021-2029 HEU and streamline future development of housing within identified housing sites. As such, the objective design standards would be complimentary and conform to existing standards but provide additional detail and clarification regarding certain housing products. The Modified Project site overlays portions of LIFOC Carve Outs 5 and 6 of Neighborhood G and Neighborhood D North. Development of the Modified Project site directly overlying active carve out areas would not be able to occur until the site is remediated to acceptable conditions in compliance with state and federal law. The Modified Project

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
	include a linear park overlay that diagonally traverses the project area. This overlay is intended to provide opportunities for exercise and recreation and create an overall more walkable community. Aesthetic concerns are addressed by the Modified Project's design guidelines, which address land use compatibility issues; landscaping design; architectural character and design; setbacks and buffers; and signage. The guidelines are designed to ensure that high quality design is implemented throughout the Specific Plan area while allowed each planning area to have its own community character.	would introduce residential land use as a new allowed use within Neighborhood D North. Therefore, future development would need to comply with the stringent standards set forth in the existing MOA, FFSRA, and subsequent agreements between the Navy, City, RWQCB, and DTSC that set forth criteria for the safe redevelopment of the former MCAS base. Existing compliance criteria cover existing hazardous conditions, including new hazardous conditions not previously analyzed, such as PFAS contamination and debris removal following the hangar fire. Compliance with PPP LU-1 would ensure that the Modified Project would result in no impact through execution of existing agreements regarding reuse of the former MCAS military site undergoing continued remediation efforts.
Policy 4.1 Mitigate traffic congestion and unacceptable levels of noise, odors, dust and light and glare which affect residential areas and sensitive receptors.	*Not previously included.*	The Modified Project would allow for residential use within Neighborhood D North, an area previously dedicated to nonresidential development. However, Neighborhood D North (PA 8, 13-14) is surrounded by existing and future residential land uses and the introduction of residential to this area would be compatible with the existing uses. This DSEIR includes existing regulations, standard conditions, and mitigation measures that reduce and/or eliminate environmental impacts of the Modified Project, as applicable and feasible. The Modified Project would increase the maximum number of dwelling units allowed to be developed in Neighborhoods D and G under the TLSP. As a result, air quality, GHG, and noise impacts are anticipated to be greater than previously analyzed under the Approved Project (see Section 5.1, *Air Quality*, 5.3, *Greenhouse Gas Emissions*, and 5.5, *Noise*). However, future development would be required to prepare project-specific analyses to determine potential air quality impacts and incorporate mitigation as necessary to reduce

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		impacts. Additionally, noise impacts from project-related traffic on off-site sensitive receptors would be less than significant, as described in Section 5.5, and no mitigation measures are required. As specified for the Approved Project, the Modified Project would continue to prioritize active modes of transportation and minimize VMT through the incorporation of mixed-use development. The Approved Circulation Plan would be carried forward under the Modified Project.
Policy 4.2 Ensure a sensitive transition between commercial or industrial uses and residential uses by means of such techniques as buffering, landscaping and setbacks.	*Not previously included.*	**Consistent.** The TLSP includes development standards for various land uses and identifies buffering measures between residential and commercial/institutional land uses. Further, as part of the Modified Project, ODS would be included for the streamlining of certain housing projects consistent with state law and the City's Housing Element. These development standards and design standards would address setbacks, landscaping, and buffering techniques for the purpose of transitioning between various land use types and intensities.
Policy 4.3 Where mixed uses are permitted, ensure compatible integration of adjacent uses to minimize conflicts.	*Not previously included.*	**Consistent.** See response to Policy 4.2.
Goal 6: Improve urban design in Tustin to ensure development that is both architecturally and functionally compatible, and to create uniquely identifiable neighborhoods, commercial and business park districts.	**Consistent.** See last paragraph of response to Goal 4, above. The Modified Project includes design guidelines that address urban design at the project, neighborhood, and community levels.	**No Change.** See responses to Goal 4, above.
Policy 6.2 Encourage and promote high quality design and physical appearance in all development projects.	*Not previously included.*	**Consistent.** Future projects implemented under the TLSP would be required to comply with the development standards and ODS developed for each product type. These standards promote high quality design and visual cohesion.
Policy 6.4 Preserve and enhance the City's special residential character and "small town"	*Not previously included.*	**Consistent.** The TLSP provides flexibility for the development of various housing product types. The

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
quality by encouraging and maintaining Tustin's low density residential neighborhoods through enforcement of existing land use and property development standards and the harmonious blending of buildings and landscape.		Modified Project would increase intensity within certain portions of the TLSP area (Neighborhoods D and G), generally, areas designated for mixed-use and medium to high density residential development. Development of Neighborhoods D and G would be complemented with enhanced streetscapes, public open spaces, and connectivity through community trails and walkways. Existing low density residential areas and areas within the City of Tustin planned for the accommodation of low density residential would remain unaffected by the Modified Project.
Policy 6.12 Review and revise, as necessary, the City's development standards to improve the quality of new development in the City and to protect the public health and safety.	*Not previously included.*	**Consistent.** The Modified Project would include preparation of Objective Design Standards (ODS), which were identified as needed by the City's updated Housing Element. ODS would improve the overall quality of future design while maintaining public health and safety standards through regulatory compliance.
Goal 7: Promote expansion of the City's economic base and diversification of economic activity.	**Consistent.** The 2017 Modified Project allows up to 9,532,419 square feet of nonresidential uses, including retail, office, service commercial, and specialized employment and merchandizing uses. Buildout of this development capacity would greatly diversify the City's economic activity. In addition to more traditional types of employment-generating uses, the approved project includes two districts that generate economic activity. The Mixed Use Urban in Planning Area 8, 13-14, would allow a range of uses that emphasize hotel, commercial retail, commercial entertainment, and public recreation. The Education Village in Planning Area 1 would provide for a mix of public-serving, office, institutional, and/or government uses. Supporting office, research and development, and commercial uses would be permitted to complement educational uses.	**No Change.** The Modified Project would continue to allow up to 9,532,419 square feet of nonresidential uses, including retail, office, service commercial, and specialized employment and merchandizing uses. Minor changes have been made regarding anticipated breakdown of future land uses based on existing development and market conditions (see Table 3-3, *Comparison of Approved Project to Modified Project*, in Section 3, *Project Description*); however, total capacity for future nonresidential development would remain the same under the Modified Project.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Goal 8: Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.	**Consistent.** The Land Use Plan designates a location for a High School in Planning Area 8, near the intersection of Valencia and Tustin Ranch Road. This school would be operated by Tustin Unified School District (TUSD). The Specific Plan area is already home to several public and quasi-public facilities, including Heritage Elementary School, the Orange County Sheriff's Regional Training Academy, Orange County Rescue Mission, and the Advanced Technology & Education Park. Per the proposed Land Use Plan, additional public facilities would be allowed elsewhere in the Specific Plan area, particularly in the Education Village. Educational, governmental, and other institutional uses would be allowed in this designation. Public services, including school services, library services, police protection and law enforcement services, fire protection, water, wastewater treatment, and utilities would be expanded as necessary to serve new residents and other new development in the Specific Plan area.	**No Change.** The Modified Project would increase the allowed residential capacity for Neighborhood D South by 100 units, D North by 1,911 units, and G by 200 units. As described in Section 5.10, *Utilities and Service Systems*, and Section 5.7, *Public Services*, the Modified Project would result in a less than significant impact with mitigation on utilities and public services. The Modified Project does not propose any actual development. However, through continued implementation of Implementation Measures (a) through (x) from the 2006 MCAS Specific Plan EIS/EIR Addendum, and application of the Infrastructure Phasing Plan incorporated as part of the 2006 Addendum, each future project would be responsible for constructing or paying fair share fees towards necessary infrastructure improvements and public service needs based on their proposed development.
Policy 8.1 Encourage within economic capabilities, a wide range of accessible public facilities and community services including fire and police protection, flood control and drainage, educational, cultural and recreational opportunities and other governmental and municipal services. Senate Bill (SB) 50, adopted in 1998, prohibits the City from using the inadequacy of school facilities as a basis for denying or conditioning the development of property. SB 50, however, gave school districts new authority to raise school impact mitigation fees. In addition, the voters passed Proposition 1A in November 1998, which provides $9.2 billion dollars in bonds to construct new or expand existing schools. In summary, school districts have the financial means and legal authority to respond to new development.	*Not previously included.*	**Consistent.** The Modified Project would increase the allowed residential capacity for Neighborhood D South by 100 units, D North by 1,911 units, and G by 200 units. As described in Section 5.10, *Utilities and Service Systems*, and Section 5.7, *Public Services*, the Modified Project would result in a less than significant impact with mitigation on utilities and public services. The Modified Project does not propose any actual development. However, through continued implementation of Implementation Measures (a) through (x) from the 2006 MCAS Specific Plan EIS/EIR Addendum, and application of the Infrastructure Phasing Plan incorporated as part of the 2006 Addendum, each future project would be responsible for constructing or paying fair share fees towards necessary infrastructure improvements and public service needs based on their proposed development.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Policy 8.7 To ensure an orderly extension of essential services and facilities, and preservation of a free-flowing circulation system, continue to require provision of essential facilities and services at the developer's expense where these systems do not exist or are not already part of the City's financed capital improvement program.	*Not previously included.*	**Consistent.** See Response to Policy 8.1.
Policy 8.8 Maintain and improve, where necessary, the City's infrastructure and facilities.	*Not previously included.*	**Consistent.** See Response to Policy 8.1.
Goal 14 (Previously Goal 13): Continue to implement the Specific Plan/Reuse Plan for MCAS Tustin which maximizes the appeal of the site as a mixed use, master planned development and that includes the following qualities seeking to create results that are very special and worthy of the site's present and historical importance.	**Consistent.** The 2017 Modified Project is a continuation of 16 years of efforts to plan a mixed-use master planned community on the MCAS Tustin site. The 2017 Modified Project is intended to maximize the appeal of the site by revising its layout and land use mix to reflect changing market conditions and community needs. Responses for Land Use Element Policies 13.1 through 13.11, below, further demonstrate consistency with this goal.	**No Change.** The Modified Project maintains the vision and future improvements of the Approved Plan. The Modified Project would allow for additional future residential units to be constructed within Neighborhood D and G. Responses for Land Use Element Policies 14.1 through 14.11 (formerly 13.1 through 13.11), below, further demonstrate the Modified Project's consistency with this goal.
Land Use Element – Policies for Reuse of the MCAS Tustin Site		
Policy 14.1: Promote new uses and design which will peacefully coexist with surrounding residences and businesses in Tustin and adjacent cities, minimizing impacts on noise, air quality, traffic, and other environmental features wherever possible.	**Consistent.** The land uses shown in the proposed Land Use Plan have been arranged to reflect land use patterns in adjacent neighborhoods and cities. The easternmost portion of the Specific Plan area east of Jamboree Road (PA 20 through PA 22) and the northwest corner of the Specific Plan area (PA 4 and PA 5) have already been developed with residential uses reflecting those to the east and north, in Irvine and Tustin, respectively. Nonresidential uses are primarily planned for the southern (PA 16-19) and western (PA 1 and PA 9-12) portions of the Specific area, where they would, in a way, serve as an extension of nonresidential uses in the Irvine Business Complex (IBC) to the south and west. Mixed-Use Transit is proposed for PA 15 to provide mixed-use transit-oriented development and residential uses that would connect to the Tustin Metrolink Station at the intersection of Edinger	**No Change.** The Modified Project would allow for residential use within Neighborhood D North, an area previously dedicated to nonresidential development. However, Neighborhood D North (PA 8, 13-14) is surrounded by existing and future residential land uses, such that the introduction of residential to this area would be compatible with the existing uses. This DSEIR includes existing regulations, standard conditions, and mitigation measures that reduce and/or eliminate environmental impacts of the Modified Project, as applicable and feasible. The Modified Project would increase the maximum number of dwelling units allowed to be developed in Neighborhoods D and G under the TLSP. As a result, air quality, GHG, and noise impacts are anticipated to be greater than previously analyzed

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
	Avenue and Jamboree Road. Furthermore, the circulation system is designed to tie into the surrounding street network and provide new routes through the former MCAS base, rather than be inwardly focused and push all new traffic out to its periphery.	under the Approved Project (see Section 5.1, *Air Quality*, 5.3, *Greenhouse Gas Emissions*, and 5.5, *Noise*). However, future development would be required to prepare project-specific analyses to determine potential air quality impacts and incorporate mitigation as necessary to reduce impacts. Additionally, noise impacts from project-related traffic on off-site sensitive receptors would be less than significant, as described in Section 5.5, and no mitigation measures are required. As specified for the Approved Project, the Modified Project would continue to prioritize active modes of transportation and minimize VMT through the incorporation of mixed-use development. The Approved Circulation Plan would be carried forward under the Modified Project.
Policy 14.2: Encourage a development pattern that offers a connectedness between buildings and uses, and has a strong sense of place through architectural style and creative landscape design.	**Consistent.** The linear park overlay introduced by the 2017 Modified Project improved connectedness between uses in the Specific Plan area because it provides a continuous linear park that runs in a diagonal direction across the project area. The linear park would traverse commercial/business uses (PA 9-12); a walkable mixed-use district (PA 8, 13-14); and a transit-oriented district (PA 15-A). The linear park would create a unifying element - both physically and visually - to the Specific Plan area and promote walking and biking between land uses. The 2017 Modified Project's design guidelines provide further direction on adequate building-to-building adjacencies, ensuring that pedestrian circulation and sight lines are highly prioritized. The guidelines also address architectural and community character and their role in creating a cohesive sense of place.	**No Change.** The Modified Project would maintain existing design standards and overlays of the Approved Project. Additionally, the Modified Project would include additional objective design standards (ODS) for future residential development implemented as part of the TLSP and City of Tustin Housing Element. These standards would be complimentary to existing design, while supporting to streamline future residential development projects, especially those with an affordable housing component.
Policy 14.3: Encourage a mixture of uses that enable people living or working on the site to	**Consistent.** At buildout, the project area would feature approximately 6,813 residential units, an 85-acre regional park, and 11.3 million square feet of nonresidential building space, including	**No Change.** The Modified Project would continue to maintain the mixed-use nature of the Specific Plan area. The Modified Project proposes to increase the residential capacity of Neighborhoods D North, D

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
choose to meet a significant part of their daily needs within the site.	commercial/business, retail, entertainment, office, educational, and institutional uses. These uses would allow people to live, work, shop, and spend leisure time all within the boundaries of the Specific Plan area. The diverse mix of uses allowed in the project area is already represented by existing retail (The District at Tustin Legacy), residential neighborhoods (Columbus Grove, Columbus Square, Tustin Fields, Amalfi Apartments, Anton Legacy affordable apartments, and Greenwood), and public facilities (Heritage School, South Orange County Community College District campus, Tustin Family Campus, Village of Hope, Army Reserves Center and the Orange County Sheriff's Regional Training Academy) constructed in the project area during the last decade. The 2017Modified Project increased the mixed-use nature of the Specific Plan area by proposing two walkable mixed-use districts near the center of the site. PA 8, 13-14 would be a 314-acre mixed-use district, which allows for a variety of residential and commercial/business uses. PA 15 would consist of 184 acres of transit-oriented, mixed-use development and 86 acres of residential uses. The Mixed-Use Transit designation provides flexibility for residential, office, commercial retail, and commercial service uses in a vertical or horizontal configuration. In addition to providing housing and employment opportunities, both these areas would be accessed by the proposed linear park, which would provide opportunities for recreation. Additionally, these new uses would be place near the Education Village providing a range of public-serving uses (Neighborhood A) and affordable housing provided in Neighborhood B.	South, and G by a total of 2,211 units, while maintaining the current nonresidential capacity.
Policy 14.4: Implement the balanced reuse plan that responds to community needs but which does not drain City resources. Wherever possible, tax	**Consistent.** See response to Goal 7, above. Buildout of the 2017 Modified Project would result in a diverse array of employment-generating and tax- revenue-generating land uses. Although the cost to increase public services and	**No Change.** The Modified Project would continue to leverage municipal tax revenues, development fees, and other sources of financial assistance to implement public components of the TLSP.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
revenues generated by uses on the site should offset the costs of public services.	infrastructure in the Specific Plan area would be paid for, in part, with municipal tax revenues, much of this cost would be incurred by private development as it is constructed.	
Policy 14.5: Promote high quality architecture, landscaping, signage, open space design, circulation patterns, and landscape patterns distinct from surrounding areas.	**Consistent.** See response to Goal 4, above.	**No Change.** See response to Goal 4, above.
Policy 14.6: Encourage the distinguished history of the Base to be preserved in one or more locations on site.	**Consistent.** The 2017 Modified Project includes language requiring compliance with the Memorandum of Agreement (MOA) between the State Historic Preservation Office, the Advisory Council on Historic Preservation, Department of Navy, County of Orange, and City of Tustin. The City has complied with the requirements of the MOA to document the history of the hangers and former Base.	**No Change.** The Modified Project would maintain the previously agreed upon MOA. On November 7, 2023, a fire erupted in Navy Hangar 28. The Navy hangar was destroyed and is undergoing complete demolition and removal. Notably, the fire was contained to Navy Hangar 28, such that Navy Hangar 29 was not impacted, and remains unaltered. Prior to the fire, the historic documentation requirements of the MOA were fulfilled.
Policy 14.7: Promote uses and institutions which will accommodate and attract 21st Century jobs and technologies.	**Consistent.** As outlined in Table 3-2 of this DSEIR, the 2017 Modified Project allows for a wide variety of nonresidential uses to be developed in the Specific Plan area. Rather than prescribe specific types of employment generating uses in specific locations, the plan is intended to be flexible and oriented to the long-range economic health of Tustin. The IBC, to the south and west, is already home to many innovative technology firms, consulting companies, and other knowledge-economy industries. Buildout of the 2017 Modified Project would promote more of these types of jobs in a 117-acre commercial district proposed for the southwest corner of the Specific Plan area (PA 9-12). This district includes 94 acres designated for Commercial/Business uses, allowing for up to 1.6 million square feet of research and development, professional and creative office, retail, senior care facilities, and specialized employment and merchandizing uses. The Education Village proposed to the north of PA	**No Change.** The Modified Project does not propose any development. The TLSP includes a variety of land uses, including commercial and institutional, which would facilitate new employment opportunities within a variety of sectors such as business, education, and retail.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
	9-12 in PA 1 allows a variety of educational and institutional uses that would be expected to serve as an incubator for technological innovation in Orange County's job centers, especially those in adjacent business parks. PA 1 is already home to the Advanced Technology & Education Park (ATEP), a career-training school that focuses on advanced technology and technical workforce development. The campus is operated as a partnership between Irvine Valley College and Saddleback College.	
Policy 14.8: Encourage uses that benefit broader community's needs and which are balanced with development that is compatible with the Tustin community.	**Consistent.** See responses to Goal 1 and Goal 2, above.	**No Change.** See responses to Goal 1 and Goal 2, above.
Policy 14.9: Ensure that land and water are clean and safe to use and that other environmental considerations are taken into account during design.	**Consistent.** Soil and groundwater remediation has been ongoing since certification of the 2001 FEIS/EIR. Responsibility for cleanup in the Specific Plan area remains unchanged by the 2017 Modified Project. Since almost all hazardous materials sites have been fully remediated and "closed" with no further action needed, a majority of the land in the Specific Plan area can be safely developed with new land uses.	**No Change.** Responsibility for cleanup in the TLSP area remains unchanged by the Modified Project. Development of the Modified Project site under LIFOC and/or overlying identified hazardous "carve out" areas and groundwater plumes would be remediated to acceptable conditions per existing regulations and agreements prior to any future development, as identified under PPP LU-1. Compliance with PPP LU-1 would ensure that the Modified Project would result in no impact due to the execution of existing agreements regarding reuse of the former MCAS military site undergoing continued remediation efforts. See response to Goal 4, above.
Policy 14.10: Promote a successful transition from military to civilian use that reasonably satisfies the public interests at local, countywide, regional, state and federal levels consistent with the need for any reuse plan to be fiscally sound and to foster economic development.	**Consistent.** The 2017 Modified Project is consistent with the MOA between the State Historic Preservation Office, the Advisory Council on Historic Preservation, Department of Navy, County of Orange, and City of Tustin. Changes to the Specific Plan proposed by the 2017 Modified Project were specifically tailored to respond to changing market conditions for residential, office, and retail development, with the goal of fostering long- term economic development in Tustin.	**No Change.** The Modified Project maintains the previously agreed upon MOA and proposed residential capacity increases would not inhibit or conflict with the implementation of existing reuse plans.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Policy 14.11: Strategically place development in a manner responsive to requirements for hazardous material cleanup, circulation and infrastructure capacity, and market absorption.	**Consistent.** Soil and groundwater remediation has been ongoing since certification of the 2001 FEIS/EIR. Most hazardous material sites in the project area, including asbestos-containing materials and buildings containing lead-based paint, have been demolished. Three hazardous material sites continue to be monitored for compliance. The Navy is responsible for remediating all such sites, which would be overlain by proposed residential uses and developed to residential standards pursuant to the compliance programs.	**No Change.** Responsibility for cleanup in the TLSP area remains unchanged by the Modified Project. Development of the Modified Project site under LIFOC and/or overlying identified hazardous "carve out" areas and groundwater plumes would be remediated to acceptable conditions per existing regulations and agreements prior to any future development, as identified under PPP LU-1. Compliance with PPP LU-1 would ensure that the Modified Project would result in no impact with existing agreements regarding reuse of the former MCAS military site undergoing continued remediation efforts. See response to Goal 4, above. Additionally, the *Tustin Legacy Development and Disposition Manual* includes plans for the transference and phased development of the TLSP area. This plan considers numerous variables, including hazardous material cleanup, circulation and infrastructure capacity, and market absorption in the strategy for future development and implementation of the TLSP. The Modified Project would be consistent with and developed according to the manual.
Circulation Element – Goals		
Goal 1: Provide a system of streets that meets the needs of current and future inhabitants and facilitates the safe and efficient movement of people and goods throughout the City consistent with the City's ability to finance and maintain such a system.	**Consistent.** As provided under the Adopted Specific Plan, implementation of the 2017 Modified Project would involve the construction of an extensive network of arterial roadways, local streets, bike lanes/trails, and pedestrian routes. For additional information about the funding of roadway improvements in the Specific Plan area, see Section 5.8, *Transportation*, of this DSEIR.	**No Change.** The Modified Project proposes to increase the residential capacity of Neighborhoods D North, D South, and G by a total of 2,211 units, while maintaining the current nonresidential capacity. The Approved Circulation Plan would be carried forward under the Modified Project. A Traffic Impact Assessment (TIA), which evaluates level of service (LOS) was completed for the Approved Project. A new TIA was prepared for the Modified Project to identify potential traffic impacts and improvements as a result of the Modified Project. There are no major impacts or changes to the

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		approved circulation system anticipated as a result of the Modified Project (EPD Solutions, 2024). The TIA is available for review upon request with the City of Tustin. Funding mechanisms would remain the same as described under the Approved Project.
Policy 1.2 Develop and implement circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians and bicycle lanes or trails that are adjacent or off-road.	*Not previously included.*	**Consistent.** Future development projects would be required to adhere to the California Vehicle Code (CVC) and California Manual of Traffic Control Devices (MUTCD), as well as the City's roadway design standards per City guidelines and municipal code. The TLSP area would be developed according to the plan's Circulation Plan and development standards included in Chapter 3 of the TLSP, including trails, bicycle and pedestrian infrastructure.
Policy 1.3 Coordinate roadway improvements with applicable regional, state and federal transportation plans and proposals.	*Not previously included.*	**Consistent.** Future development would prepare individual traffic studies as necessary and coordinate with Caltrans, the City of Irvine, Metrolink, and other entities, as necessary.
Policy 1.10 Require that proposals for major new developments include a future traffic impact analysis which identifies measures to mitigate any identified project impacts.	*Not previously included.*	**Consistent.** A plan-level TIA has been completed as part of the Modified Project and is available for review upon request with the City. Each future project would be required to prepare independent traffic studies as necessary consistent with the City's TIA and VMT screening thresholds included in the City's VMT Study Guidelines.
Policy 1.11 Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.	*Not previously included.*	**Consistent.** Under the TLSP, the remaining undeveloped lands in Planning Area (PA) 15 are planned to be transit oriented in terms of site design, mixing and increased intensity of land uses, walkability, location and design of public spaces, and direct pedestrian access to the adjacent Tustin Metrolink Station. Future residential development under the Modified Project would be consistent with the established design objectives of PA 15. Additionally, the Modified Project would continue to implement the adopted Mobility Plan within the TLSP as the Modified Project areas continue to be

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		built out. Additionally, as described in Section 5.8, *Transportation*, the Modified Project is located near established public transit and would promote an active lifestyle.
Policy 1.13 Minimize effects of transportation noise wherever possible so as to comply with the Noise Element.	*Not previously included.*	**Consistent.** As discussed under Section 5.5, *Noise,* the Modified Project is anticipated to result in less than significant impacts related to traffic noise compared to the Approved Project. Future development projects would be required to conduct studies that show interior noise level consistency with the applicable noise standards.
Policy 1.15 Ensure construction of existing roadways to planned widths, as new developments are constructed.	*Not previously included.*	**Consistent.** All future projects would be required to pay fair share improvements towards roadway improvements. Under Mitigation Measure b, developers would be required for identifying applicable dedications for buildout of roadways to planned widths.
Policy 1.16 Continue to require dedication of right-of-way and construction of required public improvements on streets adjacent to construction projects at the developer's expense.	*Not previously included.*	**Consistent.** See Response to Policy 1.15.
Goal 2: Provide for a truck circulation system that provides for the effective transport of commodities while minimizing the negative impacts throughout the City.	**Consistent.** The Circulation Element of the Tustin General Plan mentions only Irvine Boulevard and Red Hill Avenue (in the vicinity of Irvine Boulevard) as truck routes. Red Hill Avenue serves as the western boundary of the Specific Plan area. However, implementation of the 2017 Modified Project would not impede continued truck travel on that roadway. Nonresidential uses are proposed for areas adjacent to Red Hill Avenue to minimize localized air quality and noise impacts associated with truck travel and sensitive receptors.	**No Change.** The Modified Project does not propose any increases or decreases to capacity or intensity of future nonresidential land use. Implementation of the Modified Project would not result in any changes to truck circulation that could have negative impacts on adjacent sensitive receptors.
Goal 3: Support development of a network of regional transportation facilities which ensure the safe and efficient movement of people and goods from within the City to areas outside its boundaries,	**Consistent.** Section 5.8, *Transportation*, of this 2017 DSEIR evaluates the 2017 Modified Project's impact on regional transportation facilities, including intersections and roadway segments identified in the Orange County Congestion Management Program. Furthermore, land use	**No Change.** The Modified Project proposes to increase the residential capacity of Neighborhoods D North, D South, and G by a total of 2,211 units, while maintaining the current nonresidential capacity.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
and which accommodate the regional travel demands of developing areas outside the City.	changes proposed by the 2017 Modified Project are designed to create a transit-oriented district in PA 15-A near the Tustin Metrolink station, incentivizing use of the station for commuting in and out of the Specific Plan area. See also Circulation Element Goal 2.	The Approved Circulation Plan would be carried forward under the Modified Project. A Traffic Impact Assessment (TIA), which evaluates level of service (LOS) was completed for the Approved Project. A new TIA was prepared for the Modified Project to identify potential traffic impacts and improvements as a result of the Modified Project. There are no major impacts or changes to the approved circulation system anticipated as a result of the Modified Project (EPD Solutions, 2024). The TIA is available for review upon request with the City of Tustin. Funding mechanisms would remain the same as described under the Approved Project.
Goal 4: Maximize the efficiency of the circulation system through the use of transportation system management and demand management strategies.	**Consistent.** Mitigation Measures AQ-3 and AQ-4 in the 2001 FEIS/EIR require project applicants for specific types of nonresidential development projects, and in some cases the City of Tustin, to identify and implement transportation demand measures. Mitigation Measures AQ-3 and AQ-4 remain applicable under the Modified Project.	**No Change.** Mitigation Measures AQ-3 and AQ-4 remain applicable under the Modified Project.
Goal 5: Support development of a public transportation system that provides mobility to all City inhabitants and encourages use of public transportation as an alternative to automobile travel.	**Consistent.** See responses to Circulation Element Goals 3 and 4, above. The 2017 Modified Project includes a land use pattern designed to ensure convenient access to - and encourage use of - the Tustin Metrolink Station. Furthermore, as shown in Figure 3-7, *Vehicular Circulation Plan*, of the 2017 Modified Project, the plan is designed to be served by the Orange County Transportation Agency's (OCTA's) bus network, which would be modified to utilize existing and new roadways in the Specific Plan area.	**No Change.** The Modified Project accommodates current and future bus service to the area as planned by the OCTA. A Metrolink transit plaza is located on the corner of Edinger Avenue and Jamboree Road. The Modified Project would require PA 15 (Neighborhood G), across from the transit station, to be transit oriented in terms of scale, form, design, and mix of uses. A pedestrian bridge across Edinger Avenue would be the primary pedestrian and bicycle connection between the TLSP area and the transit station. Vehicular access would be provided by additional street access along Edinger Avenue. As part of the development plan for the Approved Project, proposed infrastructure includes a pedestrian and vehicular circulation system, including roadways, landscaping, parks, street lighting, sidewalks, and pedestrian paths. The access and circulation plan is intended to efficiently

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		integrate the Modified Project into the City's transportation network.
Policy 5.2 Require new development to fund transit facilities, such as bus shelters and turn-outs, where deemed necessary to meet public needs arising in conjunction with development.	*Not previously included.*	**Consistent.** A plan-level TIA has been completed as part of the Modified Project and is available for review upon request with the City. Each future project would be required to prepare independent traffic studies as necessary consistent with the City's TIA and VMT screening thresholds included in the City's VMT Study Guidelines. Additionally, future projects located near transit would coordinate with applicable transit authorities to ensure adequate levels of service.
Policy 5.5 Promote new development that is designed in a manner which facilitates provision or expansion of transit service and provides non-automobile circulation within the development.	*Not previously included.*	**Consistent.** See Response to Policy 1.11.
Goal 6: Increase the use of non-motorized modes of transportation.	**Consistent.** The 2017 Modified Project dramatically increases the amount of the Specific Plan dedicated to mixed uses. These areas, including a mixed-use district designed with a linear park (PA 8, 13-14), and transit-oriented district near the Tustin Metrolink station (PA 15-A), are designed to minimize impediments to walking and biking between uses, and encourage use of existing transit service. The overall mix of uses allowed in the Specific Plan area is also aimed at making the area somewhat self-sufficient. Conceivably, a person could work in the commercial/business district (PA 9-12) or go to school in the Education Village (PA 1); shop in The District (PA 16-19); exercise and/or play in the Recreation (PA 2); and live in one of the Specific Plan area's numerous residential neighborhoods. While this diversity of land uses would not totally eliminate vehicle trips within the Specific Plan area, it, along with the proposed network of streets and trails, would allow for many residents to travel by nonmotorized modes on a regular basis if they choose. The most powerful incentive for nonmotorized travel	**No Change.** The Modified Project proposes increased residential capacity for Neighborhoods D and G of the TLSP. The mixed-use district designed with a linear park (PA 8, 13-14), and transit-oriented district near the Tustin Metrolink station (PA 15-A) would be maintained by the Modified Project. Additionally, the Linear Park Overlay would be maintained under the TLSP SPA to allow for further connectivity and walkability. Therefore, the design of TLSP would intentionally incentivize the use of alternative modes of transportation.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
	proposed by the 2017 Modified Project is the introduction of the Linear Park Overlay. At buildout, the linear park would diagonally traverse a large cross-section of the project area, including residential, commercial, institutional, and recreational land uses. The linear park is designed specifically to create an opportunity for people to move throughout the area without relying on car travel.	
Policy 6.1 Promote the safety of pedestrians and bicyclists by adhering to uniform standards and practices, including designation. of bicycle lanes, off-road bicycle trails, proper signage, and adequate sidewalk, bicycle lane, and off-road bicycle trail widths.	*Not previously included.*	**Consistent.** See Response to Policy 1.2.
Policy 6.2 Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.	*Not previously included.*	**Consistent.** See Response to Policy 1.2.
Policy 6.14 Require new development to dedicate land and fund improvement of bicycle, pedestrian and equestrian facilities, where deemed necessary to meet public needs arising in conjunction with development.	*Not previously included.*	**Consistent.** See Response to Policy 1.15.
Conservation, Open Space, and Recreation Element		
Goal 1: Reduce air pollution through proper land use, transportation and energy use planning.	*Not previously included.*	**Consistent.** This DSEIR includes existing regulations, standard conditions, and mitigation measures that reduce and/or eliminate environmental and health-related impacts of the Modified Project, as applicable and feasible. The Modified Project would increase the maximum number of dwelling units allowed to be developed in Neighborhoods D and G under the TLSP. As a result, air quality and greenhouse gas (GHG) impacts are anticipated to be greater than previously analyzed under the Approved Project (see Section 5.1, *Air Quality*, and 5.3, *Greenhouse Gas Emissions*). Impacts to air quality and GHG would remain significant and

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		unavoidable, predominately due to mobile-source emissions. However, future development would be required to prepare project-specific analyses to determine potential air quality impacts and incorporate mitigation as necessary to reduce impacts. Project-specific analyses would ensure that future projects would not result in health risk impacts on surrounding residents. As specified for the Approved Project, the Modified Project would continue to prioritize active modes of transportation and minimize VMT through the incorporation of mixed-use development. Additionally, the TLSP incorporates access to transit services within the land use planning and includes policies to incentivize TDM measures. Therefore, the Modified Project would remain consistent.
Policy 1.1 Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.	*Not previously included.*	**Consistent.** Future projects would be required to comply with applicable Air Quality Management District rules and thresholds. Mitigation would be implemented at the project-level based on future development proposals. See Section 5.1, *Air Quality,* and Section 5.3, *Greenhouse Gas*.
Policy 1.3 Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.	*Not previously included.*	**Consistent.** As discussed in Section 5.8, *Transportation,* the Project would result in a less than significant impact on VMT. This is due to the mixed-use nature of the Modified Project area. The Modified Project area is located near major transit hubs and combines commercial and residential land uses within walking distance to one another in order to facilitate walkability and reduce reliance on private vehicles.
Policy 1.4 Develop neighborhood parks near concentrations of residents to encourage pedestrian travel to the recreation facilities.	*Not previously included.*	**Consistent.** As discussed in the Initial Study prepared for the Modified Project (see Appendix A), the Modified Project would comply with the recreational goals of the TLSP by providing accessible recreational amenities near residential areas.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Policy 1.6 Cooperate and participate in regional air quality management plans, programs, and enforcement measures.	*Not previously included.*	**Consistent.** See Response to Policy 1.1.
Goal 2: Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.	*Not previously included.*	**Consistent.** See response to Goal 1. Section 5.6, *Population and Housing*, of this DSEIR evaluates the Modified Project's impact on jobs-housing balance. The Modified Project would reduce (improve) the jobs-housing ratio slightly by adding 4,970 residential units (including potential density bonus units). Buildout of the Modified Project could result in a jobs-housing ratio of 2.08 while buildout of the Approved Project could result in a jobs-housing ratio of 2.76. The Modified Project would result in overall more balanced jobs-housing conditions within the TLSP area.
Policy 2.1 Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.	*Not previously included.*	**Consistent.** See response to Goal 1. 2017 SEIR MM AQ-3 requires the implementation of TDM measures for certain nonresidential projects.
Policy 2.2 Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.	*Not previously included.*	**Consistent.** See response to Goal 2.
Policy 2.12 Implement land use policy contained in the Land Use Element toward the end of achieving jobs/housing balance goals.	*Not previously included.*	**Consistent.** See response to Goal 2.
Goal 3: Reduce particulate emissions to the greatest extent feasible.	*Not previously included.*	**Consistent.** As discussed in Section 5.1, *Air Quality*, emissions associated with the increased residential development within the TLSP area would result in exceedance of SCAQMD thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$, which is consistent with the threshold exceedances that would occur from buildout of the Approved Project. Due to the increase in vehicle trips and localized emissions from the increase in residences proposed by the Project, the exceedance of the thresholds would be exacerbated compared to buildout of the Approved Project. However, the City has included

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		Mitigation Measures AQ-1 though AQ-4, which require distribution of trip reduction opportunities, prohibition of fireplaces, required use of electric landscaping equipment, and use of low VOC paint, which would reduce emissions. However, the majority of the Modified Project's emission exceedances are from vehicular trips consumer products that the City cannot control emissions of; and therefore, cannot feasibly be reduced below the SCAQMD thresholds. Therefore, the Modified Project would reduce emissions to the greatest extent feasible.
Policy 3.1 Adopt incentives, regulations, and/or procedures to minimize particulate emissions from paved and unpaved roads, agricultural uses, parking lots, and building construction.	*Not previously included.*	**Consistent.** As described in Section 5.1, *Air Quality*, the Modified Project would result in emissions resulting from building construction. SEIR MM AQ-5 requires use of Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities, which included in the modeling assumptions. Also, SEIR MM AQ-2 requires low VOC architectural coatings for all interior and exterior painting operations. Table 5.1-6, *Maximum Peak Unmitigated Construction Emissions*, in Section 5.1, provides the maximum daily unmitigated emissions of criteria air pollutants from construction of the additional residential units and shows that SCAQMD thresholds would not be exceeded and therefore, impacts would be less than significant, and no new construction related emissions impacts would occur. Therefore, the Modified Project would be consistent.
Goal 4: Reduce emissions through reduced energy consumption.	*Not previously included.*	**Consistent.** Section 5.2, *Energy,* includes energy consumption anticipated by construction and operation of the Modified Project. Future construction would be required to comply with City and state policies and regulations that minimize

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		overall energy consumption, such as CALGreen standards.
Policy 4.1 Promote energy conservation in all sectors of the City including residential, commercial, and industrial.	*Not previously included.*	**Consistent.** See Response to Goal 4.
Goal 5: Protect water quality and conserve water supply.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Policy 5.2 Protect groundwater resources from depletion and sources of pollution.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Policy 5.3 Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Policy 5.5 Protect water quality by responsible agency support of enforcement of water quality standards for water imported into the County, and to preserve the quality of water in the groundwater basin and streams.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Goal 7: Conserve and protect natural plant and animal communities	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Policy 7.2 Conserve important plant communities and wildlife habitats, such as riparian areas, wildlife movement corridors, wetlands, and significant tree stands through the practice of creative site planning, revegetation, and open space easements/dedications.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Policy 7.4 Require new development to revegetate graded areas.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Goal 8: Conserve and protect significant topographical features, important watershed areas, resources, and soils.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Policy 8.2 Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Policy 8.3 Encourage the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Policy 8.5 Review applications for building and grading permits, and applications for subdivision for adjacency to, threats from, and impacts on geological hazards arising from seismic events, landslides, or other geologic hazards such as expansive soils and subsidence areas.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Policy 8.10 Mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, and sensitive habitats through the environmental review process.	*Not previously included.*	**Consistent.** See Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources,* within the Initial Study prepared for the Modified Project (Appendix A).
Goal 10: Reduce solid waste produced within City.	*Not previously included.*	**Consistent.** As discussed in Section 5.10, *Utilities and Service Systems,* future project construction would generate solid waste for landfill disposal in the form of packaging and discarded materials that would be removed from the site. Construction waste would be properly characterized as required by law and recycled or disposed of at an appropriate type of landfill for such materials. Section 5.408.1 of the 2022 California Green

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Thus, the construction solid waste that would be disposed of at the landfill would be approximately 35 percent of the waste generated. Additionally, the Modified Project at buildout would generate approximately 5,775 tons of solid waste per year, at least 75 percent of which is required by California law to be recycled, which would reduce the volume of landfilled solid waste to approximately 1,444 tons per year, or 27.8 tons per week. Future projects implementing TLSP buildout would also be required to comply with all applicable State and local waste diversion requirements, including AB 939, AB 341, AB 1836, AB 827 and SB 1383. Therefore, the Modified Project would comply with all solid waste statute and regulations; and impacts would be less than significant.
Policy 10.2 Ensure that the City diverts from landfills a maximum of 50% of the solid waste generated in the City as required by the California Integrated Waste Management Board.	*Not previously included.*	**Consistent.** See Response to Goal 10.
Goal 11: Conserve energy resources through use of available energy technology and conservation practices.	*Not previously included.*	**Consistent.** See Response to Goal 4.
Goal 12: Maintain and enhance the City's unique culturally and historically significant building sites or features.	*Not previously included.*	**Consistent.** As discussed under the Cultural Resources section of the Initial Study prepared for the Modified Project (Appendix A), the Modified Project would not impact cultural resources, including the historic hangars located within the Modified Project site. The Modified Project would maintain the previously agreed upon MOA. On November 7, 2023, a fire erupted in Navy Hangar 28. The Navy hangar was destroyed and is undergoing debris removal. Notably, the fire was contained to Navy Hangar 28, such that Navy

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		Hangar 29 was not impacted, and remains unaltered. Prior to the fire, historic documentation requirements were fulfilled. The Modified Project does not propose any changes or disturbances to Hangar 29 beyond what was previously analyzed under the Approved Project. Therefore, no further impacts would occur.
Policy 12.2 Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.	*Not previously included.*	**Consistent.** See Response to Goal 12.
Goal 13: Preserve Tustin's archaeological and paleontological resources.	*Not previously included.*	**Consistent.** See Response to Goal 12.
Policy 13.1 Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.	*Not previously included.*	**Consistent.** See Response to Goal 12.
Policy 13.2 Require mitigation measures where development will affect archaeological or paleontological resources.	*Not previously included.*	**Consistent.** See Response to Goal 12.
Goal 14: Encourage the development and maintenance of a balanced system of public and private parks, recreation facilities, and open spaces that serves the needs of existing and future residents in the City of Tustin.	*Not previously included.*	**Consistent.** As discussed in the Recreation section of the Initial Study (Appendix A), under the Modified Project, the TLSP would maintain adequate park and recreation space and amenities to serve future residents based on anticipated buildout of the TLSP area. Existing and planned park facilities would be consistent with the Approved Project and future development would be required to provide park space consistent with the City's municipal code requirement of the dedication of 3 acres of parkland per 1,000 residents.
Policy 14.8 Encourage and, where appropriate, require the inclusion of recreation facilities and open space within future residential, industrial and commercial developments.	*Not previously included.*	**Consistent.** See Response to Goal 14.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Policy 14.12 Ensure that the City's laws and related implementation tools relating to park dedication and development (e.g., ordinances, regulations, in-lieu fee schedules, etc.) reflect current land and construction costs, and are, in fact, providing adequate park land and facilities concurrent with population growth.	*Not previously included.*	**Consistent.** Development proposed through implementation of the TLSP would be required to pay fees or dedicate land consistent with the City Municipal Code, Article 9, Chapter 3, Part 3, Section 9331(d).
Goal 17: Operate and maintain existing and future parks and recreation facilities so they are safe, clean, and attractive to the public; and preserve, protect, and enhance both existing and potential natural recreation areas to ensure that long-term public investments and values are not unreasonably preempted, compromised, or prevented by neglect or short-term considerations.	*Not previously included.*	**Consistent.** See Response to Goal 14 and Policy 14.12. Applicable development park fees would go towards the maintenance and operation of park facilities, as necessary.
Policy 17.2 Require park designs (including landscape treatments, buildings, irrigation, etc.) that are durable, reasonably standardized, and economical to maintain.	*Not previously included.*	**Consistent.** See Response to Goal 14. The Modified Project does not propose development; however, future projects would be reviewed to ensure durable, reasonably standardized, and economical design.
Goal 18: Ensure that the recreational goals and policies are pursued and realized in an organized, incremental, and cost-effective manner and consistent with the City of Tustin's financial resources and legal authorities and the appropriate responsibilities of other agencies, the private sector, and individual and group users.	*Not previously included.*	**Consistent.** See Response to Goal 14 and Policy 14.12.
Policy 18.5 Conserve the City's Quimby Act authority by utilizing, wherever practicable, the City's broad powers to enact and enforce its General Plan, Specific Plan(s), Redevelopment Plan(s), subdivision ordinance and Zoning Ordinance to secure public and private recreation sites, open space, trails, and other related land use objectives of community planning significance.	*Not previously included.*	**Consistent.** See Response to Goal 14 and Policy 14.12.
Public Safety Element		

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Goal 1: Reduce the risk to the community's inhabitants from flood hazards.	*Not previously included.*	**Consistent.** The Approved Project includes measures that require future development to analyze flood hazard prior to project approval. Under Mitigation Measure i, prior to issuance of any grading permit or approval of any subdivision map (except for financing and conveyance purposes), for any development that is either partially or completely located within the 100 year flood plain of the Flood Insurance Rate Map, the development applicant shall submit all required documentation to the FEMA and demonstrate that the application for a Conditional Letter of Map Revision for changes to the 100 year flood plain is satisfied in a manner meeting the approval of each respective city, as applicable. Mitigations Measures (a) through (x) include responsibilities of future developers as part of the TLSP Phasing Plan, which outline requirements for drainage improvements and other utility coordination.
Policy 1.5 Require detention basins as a flood control measure where applicable to reduce the risk from flood hazards.	*Not previously included.*	**Consistent.** See Response to Goal 1.
Goal 3: Reduce the risk to the community from geologic and seismic hazards.	*Not previously included.*	**Consistent.** Future projects would be required to conduct project-level geotechnical studies. Since certification of the 2017 SEIR, several updates to the CBC as occurred and the 2022 CBC has been adopted and will be the applicable standard for development moving forward. Several changes have been made since the 2013 CBC. All geotechnical investigations and building specifications will be conducted in compliance with the most current applicable set of CBC standards. Verification of compliance with applicable standards would be confirmed during plan check on a project-by-project basis.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Policy 3.1 Require review of soil and geologic conditions by a State-Licensed Engineering Geologist to determine stability prior to the approval of development where appropriate.	*Not previously included.*	**Consistent.** See Response to Goal 3.
Policy 3.5 Ensure that structures for human occupancy, critical structures, and vital emergency facilities are designed to minimize damage from potential geologic/seismic hazards and avoid functional impairment.	*Not previously included.*	**Consistent.** See Response to Goal 3.
Goal 4: Reduce the risk to the community's inhabitants from exposure to hazardous materials and wastes.	*Not previously included.*	**Consistent.** The Approved Project was found to result in less than significant impacts related to risk due to exposure of hazardous materials and wastes through compliance with applicable federal, state, and local regulations (see Appendix A of the 2017 SEIR). As discussed below, new hazardous conditions (PFAS and the hangar fire) would also pose a less than significant risk through compliance with the same regulatory mechanisms as described in the SEIR certified for the Approved Project. As discussed in the Hazards and Hazardous Materials section of the Initial Study prepared for the Modified Project, future development projects would result in a less than significant impact due to construction and operational hazards through regulatory compliance as well.
Policy 4.3 Transportation of hazardous waste will be minimized and regulated where possible to avoid environmentally sensitive areas and populated, congested, and dangerous routes.	*Not previously included.*	**Consistent.** See Response to Goal 4. Transportation of hazardous waste due to ongoing site remediation is coordinated through hazard agencies including the Navy, Orange County Health, and Department of Toxic Substance Control based on existing agreements and is routed to avoid potential dangers and sensitive areas. Potential transport under future development projects would be regulated through federal and state law.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Goal 5: Reduce the risk to the community's inhabitants from fires or explosions.	*Not previously included.*	**Consistent.** As noted previously, on November 7, 2023, a fire caused severe damage to Hangar 28, resulting in a total loss of the structure. While the source of the fire has yet to be determined, the Navy has undertaken several measures to ensure fire risk to the site is mitigated. Future structures under the Modified Project would be inspected by the City's fire services and would be required to comply with the CBC, as verified through plan check on a project-by-project basis.
Policy 5.4 Enforce building code requirements that assure adequate fire protection.	*Not previously included.*	**Consistent.** See Response to Goal 5.
Goal 6: Stabilize demand for law enforcement services.	*Not previously included.*	**Consistent.** As described in Section 5.6, *Population and Housing*, of this SEIR, the Modified Project is anticipated to result in 13,817 additional residents. However, future applicants would be required to coordinate with the Tustin Police Department prior to project approval to ensure that adequate security precautions and design features are in place. This residential population is expected to create the typical range of police service calls. Consistent with the Approved Project, the Modified Project includes Implementation Measure (m) which requires the City of Tustin to ensure that adequate police protection are provided. Implementation Measure (s) is incorporated to require future project developers to coordinate with Tustin Police Department to ensure that adequate security precautions are implemented into future development projects. Funding from property taxes, as a result of population growth, would be expected to grow roughly proportional to any increase in residential units and businesses in the City. Tustin Police Department would continue to add staff and equipment on an as-needed basis to accommodate the incrementally increasing demands from future development, including the Modified Project. Therefore, the additional demand for police services and protection

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		generated by the Modified Project would be satisfied through the General Fund. Therefore, impacts would be less than significant with payment of DIFs, the City's General Fund, and Implementation Measures from the FEIR/EIS.
Policy 6.1 Provide appropriate levels of police protection within the community.	*Not previously included.*	**Consistent.** See Response to Goal 6.
Policy 6.5 Promote the use of defensible space concepts (site and building lighting, visual observation of open spaces, secured areas, etc.) in project design to enhance public safety.	*Not previously included.*	**Consistent.** Future development proposed through the TLSP would be reviewed by the City and police enforcement to ensure proper crime prevention design, such as proper lighting, security, and other public safety features.
Noise Element		
Goal 2: Incorporate noise considerations into land use planning decisions.	*Not previously included.*	**Consistent.** As discussed under Section *5.5, Noise,* the Modified Project is anticipated to result in less than significant impacts related to traffic noise compared to the Approved Project. Future development projects would be required to conduct studies that show interior noise level consistency with the applicable noise standards.
Policy 2.3 Use noise/land use compatibility standards as a guide for future planning and development.	*Not previously included.*	**Consistent.** See Response to Goal 2.
Policy 2.4 Review Modified Projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise.	*Not previously included.*	**Consistent.** See Response to Goal 2.
Policy 2.5 Require new residential developments located in proximity to existing commercial/industrial operations to control residential interior noise levels as a condition of approval.	*Not previously included.*	**Consistent.** See Response to Goal 2.
Policy 2.6 Require that commercial uses developed as part of a mixed-use project (with residential) not be noise intensive. Design mixed-use	*Not previously included.*	**Consistent.** See Response to Goal 2.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
structures to prevent transfer of noise from the commercial to the residential use.		
Policy 2.7 Require new commercial/industrial operations located in proximity to existing or proposed residential areas to incorporate noise mitigation into project design.	*Not previously included.*	**Consistent.** See Response to Goal 2.
Goal 3: Develop measures to control non-transportation noise impacts.	*Not previously included.*	**Consistent.** See Response to Goal 2.
Policy 3.1 Implement a review process of Tustin's noise ordinance, and City policies and regulations affecting noise.	*Not previously included.*	**Consistent.** See Response to Goal 2.
Policy 3.2 Minimize the impacts of construction noise on adjacent land uses through limiting the permitted hours of activity.	*Not previously included.*	**Consistent.** As discussed under Section 5.5, *Noise,* noise levels would not exceed the FTA construction noise criteria of 90 dBA during the daytime hours, as construction would occur between the hours between 7:00 am to 6:00 pm, Monday through Friday, and 5:00 pm and 9:00 am on Saturdays. Thus, impacts related to construction noise would be less than significant.
Policy 3.3 Require City departments to observe state and federal occupational safety and health noise standards.	*Not previously included.*	**Consistent.** Future projects would be required to comply with applicable state and federal noise safety standards.
Growth Management Element – Goals		
Goal 1: Reduce traffic congestion.	**Consistent.** Section 5.7, *Transportation*, of this DSEIR evaluates the 2017 Modified Project's impact on regional transportation facilities, including intersections and roadway segments identified in the Orange County Congestion Management Program. When compared to buildout of the Adopted Specific Plan, the 2017 Modified Project would not exacerbate future levels of service at area intersections or freeway segments.	**No Change.** The Modified Project proposes to increase the residential capacity of Neighborhoods D North, D South, and G by a total of 2,211 units, while maintaining the current nonresidential capacity. The Approved Circulation Plan would be carried forward under the Modified Project. A Traffic Impact Assessment (TIA), which evaluates level of service (LOS) was completed for the Approved Project. A new TIA was prepared for the Modified Project to identify potential traffic impacts and

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
		improvements as a result of the Modified Project. There are no major impacts or changes to the approved circulation system anticipated as a result of the Modified Project (EPD Solutions, 2024). The TIA is available for review upon request with the City of Tustin. Funding mechanisms would remain the same as described under the Approved Project.
Goal 2: Ensure adequate transportation facilities are provided for existing and future inhabitants of the City.	**Consistent.** See responses to Circulation Element Goals 1 through 6, above.	**No Change.** See responses to Circulation Element Goals 1 through 6, above.
Policy 2.5 All new development shall be required to establish a development phasing program which phases approval of development commensurate with required improvements to roadway capacity. The Phasing Plan shall include an overall buildout development plan which can demonstrate the ability of the infrastructure to support the planned development.	**Consistent.** Section 5.6, *Population and Housing*, of the 2017 DSEIR evaluated the Modified Project's impact on jobs-housing balance. As discussed in that section, the 2,212 additional housing units and approximately 18,802 jobs generated by the Modified Project would create a more balanced jobs-housing ratio in the City (1.76) compared to buildout of the Adopted Specific Plan (2.03).	**No Change.** Section 5.6, *Population and Housing*, of this DSEIR evaluates the Modified Project's impact on jobs-housing balance. The Modified Project would reduce (improve) the jobs-housing ratio slightly by adding 4,970 residential units. Buildout of the Modified Project would result in a jobs-housing ratio of 2.08 while buildout of the Approved Project would result in a jobs-housing ratio of 2.76. The Modified Project would result in overall more balanced jobs-housing conditions within the TLSP area.
Policy 2.6 Development phasing for new projects shall be a component of the development review and entitlement process and shall be approved prior to issuance of building or grading permits.	*Not previously included.*	**Consistent.** See Response to Policy 2.5.
Goal 1: Provision of an adequate supply of housing to meet the need for a variety of housing types and the diverse socio-economic needs of all community residents commensurate with the City's identified housing needs in the RHNA allocation.	*Not previously included.*	**Consistent.** During the Housing Element process, the City identified the Modified Project site as a suitable site for rezoning to allow higher density housing. The Project would include a SPA of the Modified Project site to allow for additional future development of 2,211 units housing units (not including density bonus units), consistent with the City's certified 2021-2029 Housing Element. The allowed densities under this Project would provide for a variety of housing types and diverse socio-economic needs. Thus, the Modified Project would be consistent with Goal 1.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Goal 2: Promote fair housing opportunities for all people regardless of their special characteristics as protected under state and federal fair housing laws.	*Not previously included.*	**Consistent.** The Modified Project is proposed as a result of the City's 2021-2029 Housing Element. The Modified Project would support in facilitation of the City's larger goals and objectives to provide for fair housing conditions within the City. Specifically, the Modified Project is anticipated to support in the facilitation of development of affordable housing and housing to accommodate various special housing needs of the regional population.
Goal 5: Ensure that new housing is sensitive to the existing natural and built environment.	*Not previously included.*	**Consistent.** The existing and proposed objective design standards (ODS) would ensure high visual character and quality of future residential development proposed within the Modified Project site. Additionally, each future residential project implemented as a result of the SPA and Housing Element would require, at minimum, a project-level plan check. Thus, the Modified Project would be consistent with Goal 5.
Housing Element – Policies		
Policy 1.1: Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.	*Not previously included.*	**Consistent.** During the Housing Element process, the City identified the Modified Project site as a suitable site for rezoning to allow higher density housing. The Project would include a SPA of the Modified Project site to allow for additional future development of 2,211 units housing units (not including density bonus units), consistent with the City's certified 2021-2029 Housing Element. The allowed densities under this Project would provide for a variety of housing types and diverse socio-economic needs. Additionally, the TLSP is intentionally planned to incentivize transit and other alternative modes of transportation through the use of transit-oriented development and land use planning, the implementation of TDM measures, and the use of connective recreational areas. Thus, the Modified Project is consistent with this policy.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Policy 1.4: Initiate development permit and zoning code streamlining strategies to encourage and expedite residential development (i.e. accessory dwelling units, affordable housing units, and investments in existing buildings) to reduce and eliminate regulatory barriers.	*Not previously included.*	**Consistent.** Per Housing Element Program 1.2a, the City will develop ODS to ensure high quality residential development, while simultaneously meeting the City's goal of streamlining residential development to meet its RHNA goals. As part of the Project, ODS would be further developed. Thus, the Modified Project would be consistent with Policy 1.4.
Policy 1.5: Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for the construction of higher density housing, affordable housing, and mixed-use development (the vertical and horizontal integration of commercial and residential uses) in proximity to employment opportunities, community facilities and services, and amenities.	*Not previously included.*	**Not Applicable.** The TLSP area is the site of the former MCAS military base and is predominately vacant and undeveloped. Implementation of the TLSP would not result in infill development, but rather redevelopment of an underutilized area within the City. However, the TLSP would allow for implementation of smart growth principles, allowing for the construction of higher density housing, affordable housing, and mixed-use development (the vertical and horizontal integration of commercial and residential uses) in proximity to employment opportunities, community facilities and services, and amenities.
Policy 2.3: Promote the dispersion and integration of housing for low- and very-low income families throughout the community.	*Not previously included.*	**Consistent.** The Modified Project is proposed as a result of the City's 2021-2029 Housing Element. The Modified Project would support in facilitation of the City's larger goals and objectives to provide for fair housing conditions within the City. Specifically, the Modified Project is anticipated to support in the facilitation of development of affordable housing and housing to accommodate various special housing needs of the regional population.
Policy 2.6: Promote fair housing opportunities by supporting the continuation of policies that require relocation assistance, and/or to provide incentives and assistance for purchase of the units by low- and moderate-income households.	*Not previously included.*	**Not Applicable.** This is not a Project-specific policy and is therefore not applicable. The TLSP implements the City's Housing Element and supports in facilitation of the City's housing goals and policies. The Modified Project does not impair the City's ability to implement this policy.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
Policy 5.1: Prioritize sustainable housing developments in proximity to services and employment centers thereby enabling the use of public transit, walking or bicycling and promoting an active lifestyle.	*Not previously included.*	**Consistent.** The Modified Project allows for the future implementation of mixed-use development and the development of housing sited in proximity to services and employment centers. The TLSP is intentionally planned to incentivize transit and other alternative modes of transportation through the use of transit-oriented development and land use planning, the implementation of TDM measures, and the use of connective recreational areas. Thus, the Modified Project is consistent with this policy.
Policy 5.2: Promote green building practices for more sustainable energy conservation measures in the construction of new housing or rehabilitated units.	*Not previously included.*	**Consistent.** As described in Section 5.2, *Energy*, future development under the Modified Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24. Thus, the Modified Project would be consistent with Policy 5.2.
Program 1.2a Program 1.2a provides that the City will amend its Zoning Code to remove subjective design guidance in TCC Section 9272 (Design Review) and adopt new Objective Design Standards (ODS) to ensure that the City can provide clear guidance regarding project design, in order to streamline the development of high-quality residential development. The ODS would include provisions consistent with the requirements of Senate Bill (SB) 35. Program 1.2a is anticipated to be complete in October 2024.	*Not previously included.*	**Consistent.** The Project would be in fulfillment of Program 1.2a, which would include rezone of the Modified Project site in accordance with state law and the creation of citywide ODS to ensure clear guidance for future allowed residential uses.
Program 1.2c Program 1.2c directs the City to develop parking standards to facilitate residential housing production as part of mixed-use developments, adaptive reuse projects, and new residential developments. The program provides that parking displaced as a result of redevelopment may be replaced with vertical parking structures, as needed, to provide required parking. Additionally, the parking standards would incentivize creative parking strategies such as parking credits for transit rich development, and	*Not previously included.*	**Consistent.** The Project would be in fulfillment of Program 1.2a, which would include rezone of the Modified Project site in accordance with state law and the creation of citywide ODS to ensure clear guidance for future allowed residential uses. Parking would be implemented per the existing parking standards. The TLSP includes transit-oriented districts where development would be catered to transit and alternative transportation.

Goal/Policy	Approved Project Compliance with Goal/Policy	Modified Project Compliance with Goal/Policy
allowance of parking structures and parking lifts, by right and subject to the ODS.		

Table 5.4-4: Project Consistency with Tustin Legacy Specific Plan

Goal, Policy, or Objective	Project Consistency
1. Implement a revised land use and urban design plan for the community that weaves the existing development into an updated comprehensive vision for achieving a better balance of residential, commercial, and employment uses, well connected by a variety of transportation modes, parks, and open space.	**Consistent.** The Modified Project would include an SPA to the TLSP. The SPA would increase the existing residential caps for Neighborhood D and G. The Modified Project is proposed as part of the City's updated 2021-2029 Housing Element, which requires the City to rezone several areas of the City in order to accommodate the City's fair share RHNA based on regional housing needs. Therefore, the Modified Project would update the TLSP to provide a balance of residential, commercial, and employment uses in an area well-connected by a variety of transportation modes, parks, and open space.
2. Reposition the remaining undeveloped lands in Planning Area 15 to be transit oriented in terms of site design, mixing and increased intensity of land uses, walkability, location and design of public spaces, and direct pedestrian access to the adjacent Tustin Metrolink Station.	**Consistent.** The Modified Project would increase allowable future residential capacity of Neighborhood G. However, the Modified Project would maintain consistency with the Approved Project in plans for Planning Area 15 to be transit oriented in terms of site design, mixing and increased intensity of land uses, walkability, location and design of public spaces, and direct pedestrian access to the adjacent Tustin Metrolink Station.
3. Reposition the remaining undeveloped land in Planning Areas 8, 13, and 14 to become a new mixed-use urban center designed around a "Main Street" that connects to the adjacent Tustin Legacy Park and The District. This large area would also include a range of commercial recreation, cultural, and entertainment uses within and adjacent to the Tustin Legacy Park.	**Consistent.** The Modified Project would increase allowable future residential capacity of Neighborhood D. However, the Modified Project would maintain consistency with the Approved Project in plans for Planning Areas 8, 13, and 14 to become a new mixed-use urban center designed around a "Main Street" that connects to the adjacent Tustin Legacy Park and The District. A parcel within Neighborhood D North (APNs 430-381-41 and 430-381-91) would be zoned as exclusively residential land use; however, this area would make up a very small portion of Neighborhood D and would not conflict with the larger mixed-use vision of the TLSP for this area. The Modified Project would not reduce the allowed nonresidential capacity of Planning Areas 8, 13, and 14.
4. Establish new zoning designations for mixed-use development that provides flexibility for both horizontal and vertical mixed-use projects in Neighborhoods D and G through Mixed-Use Urban and Mixed-Use TOD land use designations.	**Consistent.** The Modified Project would include updated development standards that clarify and expand on existing requirements. Specifically, the ODS would support the streamlined design review of development proposals for housing sites identified as part of the City's updated Housing Element. The intent of the TLSP development standards is to provide flexibility for both horizontal and vertical mixed-use projects in Neighborhoods D and G, while the ODS would provide clarity for residential development.
5. Preserve the Tustin Legacy Park concept from the Adopted Specific Plan, and provide additional design direction related to trails, recreation activities, integration with adjacent development, and park design features.	**Consistent.** The Modified Project would maintain the Tustin Legacy Park in its current approved condition.
6. Implement an updated mobility plan for Tustin Legacy that ensures a well-connected system of	**Consistent.** The Modified Project proposes increased residential capacity for Neighborhoods D and G of the

Goal, Policy, or Objective	Project Consistency
roadways, pedestrian paths, bicycle routes, and bus and shuttle routes that provide safe and convenient access to uses within Tustin Legacy, the adjacent Metrolink Station, and other offsite destinations.	TLSP. The mixed-use district designed with a linear park (PA 8, 13-14), and transit-oriented district near the Tustin Metrolink station (PA 15-A) would be maintained by the Modified Project. Additionally, the Linear Park Overlay would be maintained under the TLSP SPA to allow for further connectivity and walkability.
7. Maintain the existing nonresidential land use/trip budget total for Tustin Legacy, while allowing for the reallocation of trips between certain neighborhoods, based on the revised mix of land uses for the remaining lands owned by the City of Tustin.	**Consistent.** The Modified Project would maintain the existing nonresidential capacity as approved under the Approved Project. The anticipated buildout of nonresidential land uses has slightly shifted since the Approved Project; however, the overall trips generated by nonresidential land uses would be anticipated to generally reduce as a result of these changes despite an overall anticipated increase in trips due to the addition of residential capacity, as shown in Table 5.8-2, *Modified Project Trip Generation*, in Section 5.8, *Transportation*.

Airport Environs Land Use Plan for John Wayne Airport

The Modified Project site is within the airport planning area for John Wayne Airport, which is approximately 1.5 miles to the southwest in an unincorporated portion of Orange County adjacent to the cities of Costa Mesa, Irvine, and Newport Beach. The Modified Project site is not within the airport impact zone or in airport safety compatibility zones 1 through 5, where residential and public buildings are restricted or prohibited (Airport Land Use Commission for Orange County, 2008). Therefore, land uses proposed for the Modified Project site do not conflict with the AELUP for John Wayne Airport.

However, the Modified Project site is within the AELUP-designated notification area and is subject to Federal Aviation Administration (FAA) notification and height restrictions pursuant to Federal Aviation Regulations Part 77 (FAR Part 77). As provided under the Approved Specific Plan, structures that exceed height restrictions outlined in the AELUP would require an obstruction evaluation by FAA and the airport land use commission to determine whether hazards to airport operations would result. Height restrictions applicable to the TLSP would not change as a result of the Modified Project. Therefore, impacts related to the Modified Project's AELUP consistency remain less than significant.

Federal Facility Site Remediation Agreement (FFSRA)

The SEIR certified for the Approved Project determined that impacts related to hazardous conditions related to previous activities associated with the former MCAS facility would not cause a significant environmental impact because all future development and transport of hazardous materials would be required to comply with existing federal, state, and local regulations related to hazardous materials. The use, transport, and disposal of hazardous materials would be required to comply with existing regulations of several agencies, including the Department of Toxic Substances Control (DTSC), the EPA, California Division of Occupational Safety and Health, Orange County Environmental Health, and the Orange County Fire Authority. Additionally, the Navy is responsible for remediating all hazardous materials sites overlain by proposed residential uses to residential standards pursuant to existing compliance programs.

The Modified Project would increase the allowed residential cap for TLSP Neighborhoods D and G pursuant through the implementation of an SPA. The SPA would allow residential development in portions of Neighborhood D that were not previously intended for residential use. Additionally, two new hazardous conditions have been recognized within the TLSP area since certification of the SEIR for the Approved Project. PFAS has been recognized as a pollutant of concern within recent years by the EPA and has been identified as present in certain portions of the TLSP area. Further, in November 2023, the Hangar 28 experienced a

fire that nearly completely destroyed the structure and cause the release of asbestos into the air and within the soil, as well as several other pollutants of concern. While the fire was contained to Hangar 28 within Neighborhood C, cleanup and monitoring efforts extend to the surrounding areas.

As mentioned above, an FFSRA between the Navy and the DTSC is currently in place for the former MCAS Tustin, which governs the Navy's corrective action and response obligations under the Resource Conservation and Recovery Act and CERCLA (City of Tustin, 2023). Under the Modified Project, hazardous conditions (trichloroethylene, trichloropropane, other chlorinated hydrocarbons, etc.) previously recognized under the Approve Project would continue to be handled according to the FFSRA and applicable state and federal criteria set by DTSC, EPA, and regional health authorities. Research regarding the remediation of PFAS from the TLSP is ongoing and development of impacted areas would not be authorized until EPA has provided clear guidelines for PFAS and the site has been remediated accordingly (City of Tustin, 2023). In April 2024, EPA issued the first-ever national, legally enforceable drinking water standard to protect communities from exposure to harmful PFAS (U.S. Environmental Protection Agency, 2024). Additional guidance is forthcoming and will be required prior to the conclusion of PFAS remediation efforts within the TLSP area. The Navy has included PFAS as a pollutant under their responsibility for remediation pursuant to federal law and existing agreements. The Navy is also responsible for the cleanup of the hangar fire and ongoing remediation and monitoring (Orange County Health Care Agency, 2024).

Therefore, the Modified Project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, including the existing FFSRA agreement. All hazardous conditions are currently covered under the existing agreement and regulations that govern the cleanup and disposition of the former MCAS facility, including new hazards related to PFAS and the hangar fire. Further, through implementation of PPP LU-1, the Modified Project would result in a less than significant impact.

5.4.7 CUMULATIVE IMPACTS

Under the Approved Project, cumulative impacts on land use were determined to be less than significant. Although cumulative projects considered as part of the previously approved 2017 SEIR were anticipated to result in new residential and nonresidential development in the City, the SEIR determined that areas surrounding the TLSP area are largely built out and would not be expected to experience substantial redevelopment as a result of the Approved Project. Further, the approved 2017 SEIR determined that implementation of the Approved Project would not introduce a novel land use or circulation pattern in central Orange County and would not spur redevelopment in adjacent communities (i.e., Irvine or Santa Ana) that would conflict with those cities' land use plans. Overall, the Approved Project, in combination with buildout of the Tustin General Plan, was determined to be a desired and intended impact of the policies outlined in the General Plan and 2016–2040 RTP/SCS. The goals identified in those documents advocate a balance of residential and nonresidential development, and neighborhoods designed around multimodal travel. Implementation of the Approved Project was found to be consistent with all applicable goals.

Similar to the conclusion of the 2017 SEIR certified for the Approved Project, cumulative projects identified in Table 5-1, *Cumulative Projects List,* would be anticipated to result in new residential and nonresidential development in the City. However, areas surrounding the TLSP area are largely built out and would not be expected to experience substantial redevelopment as a result of the Modified Project. The Modified Project would increase the allowed residential capacity of Neighborhoods D and G and provide objective design standards (ODS) to reduce subjectivity and streamline residential development. The Modified Project is proposed in fulfillment of the City's 2021-2029 Housing Element goals and objectives, and further, as a result of state-mandated growth management initiatives prescribed through the RHNA. The Modified Project is an intended impact of the plans and policies adopted by SCAG through the 2024 SCAG Connect SoCal RTP/SCS, the City of Tustin General Plan, and the Approved TLSP. As shown in Tables 5.4-1 through 5.4-4,

the Modified Project would be consistent with all applicable plans, policies, and regulations. Additionally, potential future development implemented as part of the Modified Project would be required comply with existing Implementation Measures (a) through (x), which establish requirements for future planning, funding, and implementation of expanded amenities, utilities, and services as a result of anticipated growth. Therefore, the Modified Project would result in a less than significant project-level impact and impacts would not be cumulatively considerable.

5.4.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- City of Tustin Municipal Code and Zoning Code
- Airport Environs Land Use Plan for John Wayne Airport
- Federal Aviation Regulations Part 77
- Resource Conservation and Recovery Act
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Plans, Programs, or Policies

PPP LU-1: A Federal Facility Site Remediation Agreement (FFSRA) between the Department of the Navy (DON) and Department of Toxic Substance Control was signed for Former MCAS Tustin on 18 August 1999. The FFSRA defines DON's response action obligations under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and corrective action obligations under the Resource Conservation and Recovery Act. All remediation activities pursuant to the FFSRA shall be carried out prior to (or in conjunction with in certain approved conditions) implementation of the TLSP. All future development shall comply with the requirements and criteria under the FFSRA and as set forth by DTSC, U.S. Environmental Protection Agency (EPA), RWQCB, and applicable local agencies (including the City of Tustin and City of Irvine).

5.4.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Without Implementation Measures (a) through (x), impacts would be potentially significant.

5.4.10 MITIGATION MEASURES

MCAS FEIR/EIS Implementation Measures Applicable to the Modified Project

(a) The City of Tustin or City of Irvine, as appropriate, shall ensure that infrastructure is constructed in phases as triggered by identified thresholds in Table 4-2 of the revised Specific Plan Phasing Plan, Phasing Plan Requirements (see Table 4-2 at the end of this Mitigation Monitoring and Reporting Program). The Phasing Plan provides an organizational framework to facilitate development of the reuse plan area in tandem with infrastructure necessary to support the planned development.

(As amended by Addendum)

This framework reflects the fact that each component of the infrastructure has its own threshold for accommodating additional development toward build out of the reuse plan area. The triggering mechanisms that identify timing of key infrastructure provisions are summarized in Table 4-2 of the

revised Specific Plan Phasing Plan, Phasing Plan Requirements (see Table 4-2 at the end of this Mitigation Monitoring and Reporting Program).

(b) Prior to a final map recordation (except for financing and re-conveyance purposes), the development applicant shall enter into an agreement with the City of Tustin and City of Irvine and any appropriate regional utility agencies, districts, and providers, as applicable, to dedicate all easement, right-of-ways, or other land determined necessary to construct adequate utility infrastructure and facilities to serve the project as determined by the City, Agency, District, or other providers.

(c) Prior to any final map recordation (except for financing and conveyance purposes), the development applicant shall enter into a secured agreement with the cities of Tustin and/or Irvine, as applicable, to participate on a pro-rated basis in construction of capital improvements necessary to provide adequate utility facilities.

(d) Prior to the issuance of permits for any public improvements or development project, a development applicant shall submit to the City of Tustin and City of Irvine, as applicable, information from IRWD which outlines required facilities necessary to provide adequate potable water and reclaimed water service to the development.

(e) Prior to the issuance of building permits, the project developer shall ensure that fire hydrants capable of flows in amounts approved by the OCFA are in place and operational to meet fire flow requirements. (As amended by Addendum)

(f) Prior to the issuance of permits for any public improvements or development project, a development applicant shall submit to the City of Tustin and City of Irvine, as applicable, information from IRWD or the City of Tustin which outlines required facilities necessary to provide adequate sanitary sewage service to the development.

(g) Prior to the issuance of grading permits or approval of any subdivision map (except for financing and re-conveyance purposes), whichever occurs first, for development within the 100 year flood plain, grading and drainage systems shall be designed by the project developer such that all building pads would be safe from inundation from runoff from all storms up to and including the theoretical 100 year storm, to the satisfaction of the City of Tustin Building Division or the Irvine Public Works Department, as applicable. Grading permits or subdivision maps generated for financing and conveyance purposes are exempt.

(h) Prior to construction of regional flood control facilities, appropriate state and federal approvals, including agreements and permits, shall be obtained. These include but are not limited to Regional Water Quality Control Board permits, including NPDES permits; Section 401 water quality certifications; Section 404 permits from the USACOE, and Section 1601 or 1603 agreements from the CDFG in a manner meeting the approval of the City of Tustin and the Irvine Public Works Department, as applicable.

(As amended by Addendum)

(i) Prior to issuance of any grading permit or approval of any subdivision map (except for financing and conveyance purposes), for any development that is either partially or completely located within the 100 year flood plain of the Flood Insurance Rate Map, the development applicant shall submit all required documentation to the FEMA and demonstrate that the application for a Conditional Letter of Map Revision for changes to the 100 year flood plain is satisfied in a manner meeting the approval of each respective city, as applicable.

(j) Prior to the approval of any applicable subdivision map (except for financing and conveyance purposes), the developer applicant shall design and construct local drainage systems for conveyance of the 10 year runoff. If the facility is in a local sump, it shall be designed to convey the 25 year runoff.

(k) Prior to any grading for any new development, the following drainage studies shall be submitted to and approved by the City of Tustin, City of Irvine, and/or OCFCD, as applicable:

(1) A drainage study including diversions (i.e., off site areas that drain onto and/or through the project site), with justification and appropriate mitigation for any proposed diversion.
(2) A drainage study evidencing that proposed drainage patterns would not result in increased 100 year peak discharges within and downstream of the project limits, and would not worsen existing drainage conditions at storm drains, culverts, and other street crossings including regional flood control facilities. The study shall also propose appropriate mitigation for any increased runoff causing a worsening condition of any existing facilities within or downstream of project limits. Implementation of appropriate interim or ultimate flood control infrastructure construction must be included.
(3) Detailed drainage studies indicating how, in conjunction with the drainage conveyance systems including applicable swales, channels, street flows, catch basins, storm drains, and flood water retarding, building pads are made safe from runoff inundation which may be expected from all storms up to and including the theoretical 100 year flood.

(l) Prior to approval of any subdivision map (except for financing or conveyance purposes), an agreement will be executed with the OCFCD that provides for the identification and contribution of a project specific Fair Share contribution toward the construction of ultimate flood control facilities needed to accommodate build out of the affected project. Interim flood control facilities may be considered for approval provided such facilities meet OCFCD requirements. Nothing shall preclude the City of Tustin from transferring the obligation onto other project developers within the project area.

(m) General

The City of Tustin and the City of Irvine, each within its respective jurisdiction, shall ensure that adequate fire protection, police protection, libraries, and parks and recreation facilities (including bikeways/trails) needed to adequately serve the reuse plan area shall be provided as necessary. To eliminate any negative impact the project could have on each community's general fund, financing mechanisms including but not limited to developer fees, assessment district financing, and/or tax increment financing (in the event that a redevelopment project area is created for the site), shall be developed and used as determined appropriate by each City. Specifically;

(1) Applicants for private development projects shall be required to enter into an agreement with City of Tustin or the City of Irvine, as applicable, to establish a fair share mechanism to provide needed fire and police protection services, libraries, and parks and recreation facilities (including bikeways) through the use of fee schedules, assessment district financing, Community Facility District financing, or other mechanisms as determined appropriate by each respective city.
(2) Recipients of property through public conveyance process, or other conveyance procedures, shall be required to mitigate any impacts of their public uses of property on public services and facilities. (As amended by Addendum)

(n) The cities of Tustin and Irvine shall jointly consult and coordinate with the Orange County Parks, Program Management and Coordination Division, in preparation of trail designs for the Peters

Canyon and Barranca trails within the reuse plan area. Improvements for each of these trails would be installed upon completion of flood control channel improvements and approval of their joint use by the OC Parks.

(o) Fire Protection/Emergency Medical Services

Prior to the first final map recordation or building permit issuance for development (except for financing and re-conveyances purposes), the project developer could be required to enter into an agreement with the City of Tustin or City of Irvine/OCFA, as applicable, to address impacts of the project on fire services. Such agreement could include participation for fire protection, personnel and equipment necessary to serve the project and eliminate any negative impacts on fire protection services.

(p) Prior to issuance of building permits, the project developer shall work closely with the OCFA to ensure that adequate fire protection measures are implemented in the project.

(q) Prior to issuance of building permits for phased projects, the project developer shall submit a construction phasing plan to the OCFA demonstrating that emergency vehicle access is adequate.

(r) Prior to the issuance of building permits, the project developer shall submit a fire hydrant location plan for the review and approval of the Fire Chief and ensure that fire hydrants capable of flows in amounts approved by the OCFA are in place and operational to meet fire flow requirements.

(s) Police Protection

Prior to issuance of building permits, the project developer shall work closely with the respective Police Department to ensure that adequate security precautions are implemented in the project.

(t) Schools

Prior to the issuance of building permits, the project developer shall submit to the respective City proof of payment of appropriate school fees adopted by the applicable school district pursuant to Government Code Section 65995. Alternatively, a project developer may enter into a mutual agreement with an applicable school district to provide alternative mitigation that addresses student generation increases.

(As amended by Addendum)

(u) Parks and Recreation

Prior to the first final map recordation (except for financing and re-conveyance purposes) or building permit issuance for development within the City of Tustin portion of the site, the project developer shall be required to provide evidence of compliance with all requirements and standards of the City of Tustin Park Code.

(v) Prior to the first final map recordation or building permit issuance within the City of Irvine portion of the site, the project developer shall be required to provide evidence of compliance with all requirements and standards of the City of Irvine Park Code.

(w) Prior to the first concept plan for tentative tract map in the City of Tustin, the project developer shall file a petition for the creation of a landscape maintenance district for the project area with the City of Tustin. The district shall include public neighborhood parks, landscape improvements, and specific trails (Barranca only), the medians in arterials, or other eligible items mutually agreed to by the petitioner and the City of Tustin. In the event that a district is not established prior to issuance of the

first building permit, maintenance of items mentioned above shall be the responsibility of a community association.

(x) Prior to approval of any subdivision map (except for financing or conveyance purposes), an agreement will be executed with the following agencies for the associated trail improvements:

a. County Parks — identification of a project specific Fair Share contribution toward the installation of necessary regional bikeway trail improvements within Peters Canyon Channel, to be installed in conjunction with the County of Orange's other channel improvements;

b. City of Tustin — the identification of a project specific Fair Share contribution toward the installation of Class II bicycle trails through the project site. For the area of the site northeast of Irvine Center Drive, a separate agreement would be required to ensure the provision of a bikeway right-of-way easement, and design and construction of a bike trail along the SCRRA/OCTA rail tracks from Harvard Avenue westerly to the Peters Canyon Channel. In addition, project developers of the areas of the site southeast of the Peters Canyon Channel would need to accommodate access to both the Peters Canyon Trail and the trail adjacent to the SCRRA/OCTA tracks in any project site design including dedication of any necessary recreational trail easements;

c. City of Tustin — the identification of a project specific Fair Share contribution toward installation of Class I bikeway trail improvements northerly of Barranca Parkway after completion of the Barranca Channel improvements. For proposed developments adjacent to Barranca Channel, separate agreements would be required to ensure the establishment of a bikeway right-of-way easement between Jamboree Road and Red Hill Avenue.

5.4.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation Measures (a) through (x) identified above, along with existing regulatory programs, would reduce potential impacts associated with land use to a level that is less than significant. Therefore, no significant unavoidable adverse impacts related to land use would occur.

5.4.12 REFERENCES

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5.5 Noise

5.5.1 INTRODUCTION

This Draft SEIR section evaluates the potential noise and vibration impacts that could result from buildout of the proposed Modified Project. It discusses the existing noise environment within and around the TLSP area, as well as the regulatory framework for regulation of noise. This section analyzes the effect of the Modified Project on the existing ambient noise environment during construction and operational activities; and evaluates noise effects for consistency with relevant local agency noise policies and regulations. The analysis in this section also addresses impacts related to groundborne vibration. Information in this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *City of Tustin General Plan EIR*, certified 2018
- *Tustin Legacy Specific Plan Amendment Final Supplemental Environmental Impact Report (FEIR),* prepared by PlaceWorks, certified July 2017
- Tustin City Code
- *Tustin Legacy Specific Plan Amendment Project Noise and Vibration Impact Analysis*, prepared by LSA, May 2024 (Appendix C)

Noise and Vibration Terminology

Various noise descriptors are utilized in this EIR analysis, and are summarized as follows:

Ambient noise level: The background noise level associated with a given environment at a specified time and is usually a composite of sound from many sources from many directions.

dB: Decibel, the standard unit of measurement for sound pressure level.

dBA: A-weighted decibel, an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

Leq: The equivalent sound level, which is used to describe noise over a specified period of time, typically 1 hour, in terms of a single numerical value. The Leq of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The Leq may also be referred to as the average sound level.

Lmax: The instantaneous maximum noise level experienced during a given period of time.

Lmin: The instantaneous minimum noise level experienced during a given period of time.

Lx: The sound level that is equaled or exceeded "x" percent of a specified time period. The "x" thus represents the percentage of time a noise level is exceeded. For instance, L50 and L90 represents the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.

Ldn: Also termed the "day-night" average noise level (DNL), Ldn is a measure of the average of A-weighted sound levels occurring during a 24-hour period, accounting for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted by adding 10 dBA to take into account the greater annoyance of nighttime noises.

CNEL: The Community Noise Equivalent Level, which, similar to the Ldn, is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dBA to measured noise levels between the hours of 7:00 p.m. to 10:00 p.m. and after an addition of 10 dBA to noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Effects of Noise

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance)
- Interference effects (e.g., communication, sleep, and learning interference)
- Physiological effects (e.g., startle response)
- Physical effects (e.g., hearing loss)

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects refer to interruption of daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep. With regard to the subjective effects, the responses of individuals to similar noise events are diverse and are influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be to those hearing it. With regard to increases in A-weighted noise levels, the following relationships generally occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by the human ear.
- Outside of the laboratory, a 3-dBA change in noise levels is considered to be a barely perceivable difference.
- A change in noise levels of 5 dBA is considered to be a readily perceivable difference.
- A change in noise levels of 10 dBA is subjectively heard as doubling of the perceived loudness.

Noise Attenuation

Stationary point sources of noise, including mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 dBA per doubling of distance from the source over hard surfaces to 7.5 dBA per doubling of distance from the source over hard surfaces, depending on the topography of the area and environmental conditions (e.g., atmospheric conditions, noise barriers [either vegetative or manufactured]). Thus, a noise measured at 90 dBA 50 feet from the source would attenuate to about 84 dBA at 100 feet, 78 dBA at 200 feet, 72 dBA at 400 feet, and so forth. Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate, approximately 4 to 6 dBA per doubling of distance from the source.

Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source.

Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.

Fundamentals of Vibration

Vibration is energy transmitted in waves through the ground or man-made structures. These energy waves generally dissipate with distance from the vibration source. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. VdB serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

5.5.2 REGULATORY SETTING

5.5.2.1 Federal Regulations

Federal Transit Administration

The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (Federal Transit Adminstration, 2018) provides general assessment construction noise criteria based on the composite noise levels per construction phase, which are provided in Table 5.5-1.

Table 5.5-1: FTA Construction Noise Criteria

Land Use	Daytime 1-hour Leq (dBA)	Nighttime 1-hour Leq (dBA)
Residential	90	80
Commercial	100	100
Industrial	100	100

dBA = A-weighted decibels
Leq = equivalent continuous sound level
Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA, 2018).

The FTA *Transit Noise and Vibration Impact Assessment Manual* also provides criteria for vibration impacts. Table 5.5-2 provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building and Table 5.5-3 lists the potential vibration building damage criteria from construction activities. FTA guidelines show that a vibration level of up to 0.5 in/sec in PPV is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For non-engineered timber and masonry buildings, the construction building vibration damage criterion is 0.2 in/sec in PPV.

Table 5.5-2: Vibration Annoyance Residential Thresholds

Land Use	Max L_v (VdB)	Description of Use
Residential Day	78	Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20×).
Residential Night and Operating Rooms	72	Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100×) and other equipment of low sensitivity.

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA, 2018)

Table 5.5-3: Construction Vibration Damage Thresholds

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA, 2018)

5.5.2.2 State Regulations

Title 24, California Building Code

State regulations related to noise include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior sources, the noise insulation standards set forth an interior standard of DNL 45 dBA in any habitable room and, where such units are proposed in areas subject to noise levels greater than DNL 60 dBA, require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard. If the interior noise level depends upon windows being closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

The mandatory measures for non-residential buildings state that new construction shall provide an interior noise level that does not exceed an hourly equivalent level of 50 dBA Leq in occupied areas during any hour of operation. Title 24 standards are enforced through the City's building permit application process.

5.5.2.3 Local and Regional Regulations

General Plan

The City's General Plan Land Use Element includes the following goals and policies that are relevant to the Modified Project:

Goal 2 **Ensure that future land use decisions are the result of sound and comprehensive planning.**

Policy 2.6 Maintain consistency with the Airport Environs Land Use Plan (AELUP) for John Wayne Airport in terms of maximum allowable building height, noise levels, safety areas, and other applicable standards.

The City's General Plan Noise Element includes the following goals and policies that are relevant to the Modified Project:

Goal 2 **Incorporate noise considerations into land use planning decisions.**

Policy 2.3 Use noise/land use compatibility standards as a guide for future planning and development.

Policy 2.4 Review Modified Projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise impacts.

Policy 2.5 Require new residential developments located in proximity to existing commercial/industrial operations to control residential interior noise levels as a condition of approval.

Policy 2.8 Replace a significant noise source with non-noise generating land uses when plans for future use of areas are developed.

Goal 3 **Develop measures to control non-transportation noise impacts.**

Policy 3.1 Use noise/land use compatibility standards as a guide for future planning and development.

Policy 3.2 Minimize the impacts of construction noise on adjacent land uses through limiting the permitted hours of activity.

Policy 3.2 Use noise/land use compatibility standards as a guide for future planning and development.

The City's Noise Element also includes standards related to excessive noise levels. The City's General Plan noise standards for land uses are provided in Table 5.5-4.

Table 5.5-4: City of Tustin General Plan Noise Element Standards

Land Use	Noise Standards[1]	
	Interior[2,3]	Exterior
Residential-Single family, multifamily, duplex, mobile home	CNEL 45 dB	CNEL 65 dB[4]
Residential-Transient lodging, hotels, motels, nursing homes, hospitals	CNEL 45 dB	CNEL 65 dB
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting halls, etc.	Leq(12) 45 dB(A)	-
Schools	Leq(12) 45 dB(A)	Leq(12) 67 dB(A)[5]
General offices, reception, clerical, etc.	Leq(12) 50 dB(A)	-
Bank lobby, retail store, restaurant, typing pool, etc.	Leq(12) 55 dB(A)	-
Manufacturing, kitchen, warehousing, etc.	Leq(12) 65 dB(A)	-

Land Use	Noise Standards[1]	
	Interior[2,3]	Exterior
Parks, playgrounds	-	CNEL 65 dB[5]
Golf courses, outdoor spectator sports, amusement parks	-	CNEL 70 dB[5]

Notes:
[1] CNEL: Community Noise Equivalent Level; Leq(12): The A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operation).
[2] Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements to provide a habitable environment.
[3] Indoor environment excluding bathrooms, toilets, closets and corridors.
[4] Outdoor environment limited to rear yard of single-family homes, multifamily patios and balconies (with a depth of 6' or more) and common recreation areas.
[5] Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.
Source: City of Tustin General Plan Noise Element

City of Tustin Municipal Code

Pursuant to the Tustin City Code (TCC) Section 6-4614 and 6-4615, noise levels at residential properties are restricted from exceeding certain noise levels for extended periods of time. Table 5.5-5 provides the Municipal Code interior and exterior noise standards that are applied to residential properties.

Table 5.5-5: Tustin City Code Residential Noise Standards

Noise Zone	Exterior/ Interior	Time Period	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
Residential	Exterior	7:00 AM to 10:00 PM	55	60	65	70	75
		10:00 PM to 7:00 AM	50	55	60	65	70
	Interior	7:00 AM to 10:00 PM	—	—	55	60	65
		10:00 PM to 7:00 AM	—	—	45	50	55
Mixed-Use	Exterior	Anytime	60	65	70	75	80

Source: City of Tustin Municipal Code, Article 4, Chapter 6, Section 4614 and 4615.

With respect to construction-related noise, Chapter 6, Section 4616 of the Tustin City Code specifies that noise sources associated with construction activities are prohibited before the hours of 7:00 AM and after 6:00 PM, Monday through Friday; before 9:00 AM and after 5:00 PM on Saturdays; anytime on Sundays; or anytime during City-observed federal holidays.

City of Irvine Municipal Code

Section 6-8-204 of the Irvine Municipal Code establishes the maximum permissible noise level that may intrude into a neighbor's property. Table 5.5-6 provides the City's maximum noise standard based on the noise zone, the location of the noise (exterior/interior), and the time period. These noise standards do not apply to multifamily residence private balconies.

Table 5.5-6: City of Irvine Municipal Code Residential Noise Standards

Noise Zone	Exterior/ Interior	Time Period	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
1	Exterior	7:00 AM to 10:00 PM	55	60	65[1]	70	75
		10:00 PM to 7:00 AM	50	55	60	65[1]	70
	Interior	7:00 AM to 10:00 PM	—	—	55	60	65

Noise Zone	Exterior/ Interior	Time Period	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
		10:00 PM to 7:00 AM	—	—	45	50	55

[1] This standard does not apply to multifamily residence private balconies. Multifamily developments with balconies that do not meet the 65 dBA CNEL criterion are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.
Source: City of Irvine Municipal Code Section 6-8-204.

The City of Irvine Municipal Code Section 6-8-205a regulates timing of construction activities and includes special provisions for sensitive land uses. Construction activities shall occur only between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 9:00 a.m. and 6:00 p.m. on Saturday. No construction shall be permitted outside of these hours or on Sundays and federal holidays, except for Columbus Day, unless a temporary waiver is granted by the Chief Building Official or his/her authorized representative. Trucks, vehicles, and equipment that are making or are involved with material deliveries, loading or transferring materials, equipment service, or maintenance of any devices or appurtenances for or within any construction project in the city shall not be operated or driven on City streets outside of these hours or on Sundays and federal holidays unless the City grants a temporary waiver.

5.5.3 ENVIRONMENTAL SETTING

5.5.3.1 Existing Noise Levels

The primary existing noise sources in the TLSP area are roadways, including Barranca Parkway, Red Hill Avenue, Park Avenue, intermittent train noise, and commercial, office, and residential uses. To assess existing noise levels of the environment, long-term (24-hour) noise level measurements were conducted on February 8 and 9, 2024, at three locations as shown on Figure *5.5-1, Noise Measurement Locations*. Table *5.5-7* provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements. As shown, the existing ambient noise levels range from 69.2 to 73.2 dBA CNEL.

Table 5.5-7: Summary of 24-Hour Ambient Noise Level Measurements

Location		Daytime Noise Levels[1] (dBA Leq)	Evening Noise Levels[2] (dBA Leq)	Nighttime Noise Levels[3] (dBA Leq)	Daily Noise Levels (dBA CNEL)
LT-1	Tustin Legacy Park. Along the western corner near the Barranca Parkway and Red Hill Avenue intersection, on a light pole approximately 110 ft away from the Red Hill Avenue centerline.	66.1 – 71.1	65.1 – 65.7	56.5 – 64.7	70.2
LT-2	2810 Warner Avenue, Irvine. Located near the western façade of the Park Apartments Irvine, on a tree approximately 120 ft away from the Park Avenue centerline.	65.7 – 69.4	61.7 – 63.9	54.3 – 66.5	69.2
LT-3	117 Liberty Street, Tustin. Near the northern façade of a townhome, on a tree approximately 70 ft away from the rail tracks centerline.	64.7 – 71.5	65.8 – 71.3	64.9 – 67.3	73.2

[1] Daytime = from 7:00 a.m. to 7:00 p.m.
[2] Evening = from 7:00 p.m. to 10:00 p.m.
[3] Nighttime = from 10:00 p.m. to 7:00 a.m.
Source: Noise and Vibration Impact Analysis (see Appendix C).

5.5.3.2 Existing Vibration

Aside from periodic construction work that may occur in the vicinity of the TLSP area, the TLSP area and adjacent land uses are not currently exposed to substantial sources of groundborne vibration.

5.5.3.3 Existing Airport Noise

John Wayne Airport is located approximately 1.5 miles to the southwest of the TLSP area. The TLSP area is located outside of the airport's 60 CNEL noise contour. In addition, the General Aviation Noise Ordinance restricts airport operations between 11:00 p.m. and 7:00 a.m., to limit the hours of noise generated by John Wayne Airport.

5.5.3.4 Sensitive Receptors

Sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include residences, schools, hospitals, and recreation areas. Existing offsite sensitive noise receptors where someone can remain for 24 hours in the vicinity of Modified Project site consists of residences.

The Modified Project considers changes to the Approved Project through a proposed SPA. The Approved Project considers buildout of the TLSP as a whole and does not analyze the environmental impact of the project onto itself, but rather impacts on the surrounding area. Existing sensitive air quality receptors outside of the TLSP area where someone can remain for 24-hours in the vicinity of the Project site consists of residences. The closest existing sensitive receptors are residences, The Bowery, located approximately 140 feet west of the TLSP boundary (see *Figure 5-1, Cumulative Projects*). However, in consideration that buildout of the TLSP has and will continue to occur over multiple phases, future sensitive receptors within 50 feet of the Modified Project site have been conservatively considered for analysis of the Modified Project site (to account of existing and future onsite and offsite receptors).

Noise Monitor Locations

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5.5.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to result in:

NOI-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of Modified Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

NOI-2 Generation of excessive groundborne vibration or groundborne noise levels.

NOI-3 For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in Modified Project area to excessive noise levels.

Construction Noise and Vibration

A potentially significant construction noise and vibration impact could occur if Project-related construction activities:

- Occur after 6:00 p.m. and before 7:00 am. Monday through Friday, after 5:00 p.m. and before 9:00 a.m. on Saturdays, or anytime on Sundays or City-observed federal holidays;
- Create noise levels which exceeds the Federal Transit Administration (FTA) threshold of daytime exterior construction noise level of 90 dBA Leq or 80 dBA Leq nighttime acceptable noise level threshold at nearby sensitive receiver locations; or
- Generate vibration levels which exceed the FTA threshold of 78 VdB at residences for annoyance or 0.2 PPV in/sec at nearby buildings for construction.

Off-Site Traffic Noise

A potentially significant noise and vibration impact could occur if offsite traffic noise levels at noise-sensitive land uses (e.g., residential, etc.) creates a *barely perceptible* 3 dBA CNEL or greater project-related noise level increase.

Operational Noise

The Modified Project may result in a potentially significant operational noise impact if Project-related operational (stationary source) noise levels exceed the exterior 55 dBA daytime (7:00 a.m. to 10:00 p.m.) or 50 dBA nighttime (10:00 p.m. to 7:00 a.m.) noise level standards for sensitive residential land uses.

5.5.5 METHODOLOGY

Construction Noise

To identify the temporary construction noise contribution to the existing ambient noise environment, the construction noise levels anticipated from usage of construction equipment necessary for future buildout of the residential uses included in the proposed Modified Project are compared against the thresholds listed previously to assess the level of significance associated with temporary construction noise level impacts.

Operational Noise

The primary source of noise associated with the operation from buildout of the Modified Project would be from vehicular trips. The expected roadway noise level increases from vehicular traffic were calculated using the Federal Highway Administration (FHWA) traffic noise prediction model and the average daily traffic volumes prepared for the Modified Project. As detailed in Section 5.8, *Transportation,* buildout from the Approved Project would generate approximately 100,611 ADT, including 5,118 AM peak hour trips and 9,346 PM peak hour trips while buildout associated with incorporation of the proposed Modified Project would generate approximately 116,289 ADT, including 8,370 AM peak hour trips and 11,123 PM peak hour trips. As such, the Modified Project would result in an increase in 15,679 ADT, including 3,251 AM peak hour trips and 1,777 PM peak hour trips. These AM and PM peak hour increases in traffic would be distributed amongst various intersections and increase ambient noise. The increase in noise levels generated by the vehicular trips have been quantitatively estimated and compared to applicable noise standards and thresholds of significance.

Secondary sources of noise would include new stationary sources (such as heating, ventilation, and air conditioning units) associated with the buildout of the additional residences included in the proposed Modified Project. The increase in noise levels generated by these activities has been qualitatively analyzed and compared to applicable noise standards and thresholds of significance.

Vibration

Aside from noise levels, groundborne vibration would also be generated during construction of future buildout of the Modified Project by various construction-related activities and equipment; and could be generated by truck traffic traveling to and from Modified Project site. The potential ground-borne vibration levels resulting from construction activities occurring from buildout of the proposed Modified Project were estimated by data published by the FTA. Thus, the groundborne vibration levels generated by these sources have also been quantitatively estimated and compared to the applicable thresholds of significance listed previously.

5.5.6 ENVIRONMENTAL IMPACTS

Summary of Impacts Previously Identified

The certified FEIS/EIR determined that noise impacts would be significant if noise levels for sensitive receptors exceeded noise criteria established in the noise elements of the general plans for the cities of Tustin, Irvine, and Santa Ana. Sensitive receptors are residences, schools, libraries, hospitals, and recreational areas. The FEIS/EIR identified that an increase of 3 dB over existing noise levels experienced by a sensitive receptor would be a significant impact.

The FEIS/EIR determined that the increase in traffic levels would not result in a significant impact to roadways surrounding the Specific Plan area. However, significant noise impacts were found for residents near the extension of Tustin Ranch Road to Von Karman Avenue and to residential and park uses adjacent to Warner Avenue between Harvard Avenue and Culver Drive.

The FEIS/EIR found that future sensitive receptors developed in accordance with the Specific Plan would incorporate applicable regulations and impacts would be less than significant.

The FEIS/EIR determined that there would be a significant impact to existing onsite housing planned for reuse. Mitigation measures were incorporated to reduce noise levels below 65 dB to less-than-significant levels.

The 2004 Supplemental EIR analyzed the extension of Tustin Ranch Road between Walnut Avenue and the Future Alignment of the Valencia North Loop. It determined that short-term construction noise impacts would be less than significant. It identified a significant impact to sensitive receptors along Tustin Ranch Road. Mitigation Measure MM N-1, requiring installation of a sound wall, reduced this impact to less than significant. This sound wall has been constructed.

The 2006 Addendum recognized that minor internal changes to the roadway network would change noise levels for land uses near the roadways. However, it found that there were no new significant short-term construction-related or long-term traffic noise impacts and that mitigation measures from the FEIS/EIR would apply.

Under the 2017 SEIR, one new noise impact was identified, traffic noise impacts along Moffett Drive from Park Avenue to Sonora Street/Meridian Way and along Valencia Avenue from Tustin Ranch Road to Park Avenue would increase noise impacts compared to the Adopted TLSP (2017 Draft SEIR, p. 5.4-20). However, the analysis found that with application of noise mitigation measures from the FEIR/EIS and 2004 SEIR, which includes various noise buffering construction techniques and future construction of a soundwall along Tustin Ranch Road, impacts were determined to be less than significant with mitigation.

Proposed Modified Project

Since certification of the 2017 SEIR, the noise environment described in the FEIS/EIR has not changed. Major noise sources on or near the TLSP area include vehicular traffic along surrounding major roadways, the railroad along Edinger Avenue, and aircraft noise from John Wayne Airport located less than two miles to the southwest. The TLSP area is not within a 60 dB CNEL noise contour from John Wayne Airport.

IMPACT NOI-1: MODIFIED PROJECT WOULD NOT RESULT IN GENERATION OF A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF MODIFIED PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES.

Construction

Less than Significant Impact.

The construction phasing for the Modified Project is planned to be implemented over a 20-year period between 2025 and 2045 and would occur between the hours between 7:00 am to 6:00 pm, Monday through Friday, and 5:00 pm and 9:00 am on Saturdays, with no construction on Sundays or City-observed holidays, per Tustin City Code Section 4616.

Construction Traffic Noise

Construction crew commutes and the transport of construction equipment and materials to construction areas would incrementally increase noise levels on roads leading to the TLSP area. Although there would be a relatively high single-event noise-exposure potential causing intermittent noise nuisance (passing trucks at 50 ft would generate up to 84 dBA Lmax), the effect on longer-term ambient noise levels would be small when compared to existing daily traffic volumes on Jamboree Road, Barranca Parkway, or Red Hill Avenue. It is estimated that during construction of the residential units included in the proposed Modified Project, an additional 12,514 vehicles, consisting of worker and hauling trips, would be added to the roadways leading to the TLSP area. Because the existing traffic volume on Jamboree Road (between 48,449 and 75,334 ADT), Barranca Parkway (between 23,247 and 34,011 ADT), and Red Hill Avenue (28,247 ADT)[1] is considerably

[1] Traffic volumes are provided in Table P of the Noise and Vibration Impact Analysis prepared for the Modified Project attached as Appendix C.

more than 12,514, construction-related vehicle trips would not approach existing daily traffic volumes and traffic noise would not increase by 3 dBA CNEL. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, construction-related noise impacts associated with worker commute and equipment transport would be less than significant.

Construction Equipment Noise

Construction activities for the residential units would include site preparation, grading, building construction, paving, and architectural coatings. As such, noise generated by construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that can reach high levels when combined. Table 5.5-8 lists typical construction equipment noise levels at a distance of 50 ft between the equipment and a noise receptor, taken from the Federal Highway Administration's (FHWA) Roadway Construction Noise Model.

Table 5.5-8: Construction Reference Noise Levels

Equipment Description	Acoustical Usage Factor (%)[1]	Maximum Noise Level (Lmax) at 50 Feet[2]
Auger Drill Rig	20	84
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Paver	50	77
Pickup Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Trencher	50	80
Welder	40	73

[1] Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] Maximum noise levels were developed based on Specification 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
Source: Noise and Vibration Impact Analysis (see Appendix C).

The construction composite noise levels at a distance of 50 feet would range from 74 dBA Leq to 88 dBA Leq with the highest noise levels occurring during the site preparation and grading phases. In general, a doubling of distance would decrease noise levels by 6 dBA while halving the distance would increase noise levels by 6 dBA.

The details of future developments and the related construction pursuant to the proposed Modified Project are unknown. Thus, an analysis based on a typical development of a 5-acre site at the closest sensitive receptors is provided. Table 5.5-9 shows that the composite noise levels from the center of construction activities within a 5-acre site would be 73 dBA Leq, while the nearest existing offsite sensitive uses would reach 71 dBA Leq. These noise levels do not take into account intervening topography or barriers.

Table 5.5-9: Construction Noise Levels at Sensitive Receptors

Receptor (Location)	Composite Noise Level (dBA Leq) at 50 ft[1]	Distance (ft)	Composite Noise Level (dBA Leq)
Residences within 50 Feet of New Infill Sites	88	280	73
The Bowery Mixed-use Development (West of TLSP Area)		370	71

Source: Noise and Vibration Impact Analysis (see Appendix C).

These noise levels would not exceed the FTA construction noise criteria of 90 dBA during the daytime hours, as construction would occur between the hours between 7:00 am to 6:00 pm, Monday through Friday, and 5:00 pm and 9:00 am on Saturdays. Thus, impacts related to construction noise would be less than significant. This is consistent with the findings of the 2017 SEIR, and there would be no increase in the impacts previously identified.

Operation

Less than Significant with Mitigation Incorporated.

Traffic Noise Impacts

The primary source of noise associated with the operation from buildout of the Modified Project would be from vehicular trips. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. The level of traffic noise depends on three primary factors: (1) the volume of traffic; (2) the speed of traffic; and (3) the number of trucks in the flow of traffic.

The expected roadway noise level increases from vehicular traffic were calculated using the FHWA traffic noise prediction model and the average daily traffic volumes prepared for the Modified Project. As detailed in Section 5.8, *Transportation*, buildout from the Approved Project would generate an increase of 15,679 ADT, including 3,251 AM peak hour trips and 1,777 PM peak hour trips. These AM and PM peak hour increases in traffic would be distributed amongst various roadway segments and increase ambient noise.

Table 5.5-10, *Traffic Noise Levels Without and With Buildout of the Proposed Modified Project*, shows that the increase in Project-related traffic noise would be no greater than 0.9 dBA. Noise level increases less than 3 dBA are not perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from project-related traffic on off-site sensitive receptors would be less than significant, and there would be no increase in the impacts previously identified.

Stationary Noise Impacts

The site of the new residences within the Modified Project site and adjacent offsite land uses would be potentially exposed to stationary-source noise impacts from the proposed onsite heating, ventilation, and

air conditioning (HVAC) equipment and truck deliveries and loading and unloading activities. It is expected that on-site stationary sources would meet the City of Tustin maximum noise level standards.

However, given that specific details related to stationary impacts of future developments are not known at this time and will not be known until a development project is proposed, 2017 SEIR MM NOI-3 would be implemented to require all future development projects to prepare project-specific plans and studies to determine whether any exterior noise sensitive areas would experience noise levels greater than 65 dBA CNEL or interior noise levels of 45 dBA CNEL; and to identify any noise reduction features for the proposed development (e.g. upgraded windows with Sound Transmission Class (STC) ratings of 30–35). Each development project shall confirm that proposed siting of noise-generating stationary sources, if any, would not result in an exceedance of applicable noise thresholds at surrounding land uses. Thus, with implementation of MM NOI-1, impacts related to stationary noise impacts would be less than significant, consistent with the findings of the 2017 SEIR. There would be no increase in the impacts previously identified.

Table 5.5-10: Traffic Noise Levels Without and With Buildout of the Proposed Modified Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Walnut Ave. between Tustin Ranch Rd. and Jamboree Rd. SB.	23,157	67.4	23,634	67.5	23,788	67.5	0.0	23,873	67.5	24,028	67.5	0.0
Walnut Ave. between Jamboree Rd. SB. and Jamboree Rd. NB.	16,868	66.0	17,464	66.2	17,504	66.2	0.0	18,104	66.3	18,144	66.3	0.0
Edinger Ave. between Newport Ave. and Del Amo Ave.	24,765	66.4	28,825	67.1	29,432	67.2	0.1	36,539	68.1	37,146	68.2	0.1
Edinger Ave. between Del Amo Ave. and Red Hill Ave.	26,835	66.8	31,409	67.5	32,074	67.6	0.1	40,377	68.6	41,043	68.6	0.0
Edinger Ave. between Red Hill Ave. and Kensington Park Dr.	23,443	66.2	26,573	66.7	27,341	66.9	0.2	31,862	67.5	32,630	67.6	0.1
Edinger Ave. between Kensington Park Dr. and Jamboree Rd. SB.	22,449	66.0	23,968	66.3	24,508	66.4	0.1	27,123	66.8	27,663	66.9	0.1
Von Karman Ave. between Barranca Pkwy. and Alton Pkwy.	26,488	67.4	29,000	67.8	29,643	67.9	0.1	34,285	68.5	34,927	68.6	0.1
Edinger Ave. between Jamboree Rd. NB and Harvard Ave.	25,738	66.6	26,959	66.8	27,125	66.8	0.0	29,092	67.1	29,258	67.2	0.1
Valencia Ave. between Red Hill Ave. and Armstrong Ave.	10,156	63.5	11,327	64.0	11,703	64.1	0.1	13,015	64.6	13,391	64.7	0.1
Valencia Ave. between Armstrong Ave. and Kensington Park Dr.	11,761	64.1	13,252	64.7	13,632	64.8	0.1	15,528	65.4	15,908	65.5	0.1
Valencia Ave. between Kensington Park Dr. and Tustin Ranch Rd.	15,695	65.4	19,245	66.3	19,905	66.4	0.1	24,614	67.4	25,275	67.5	0.1
Moffett Dr. between Tustin Ranch Rd. and Park Ave.	3,238	57.7	6,892	61.0	8,459	61.9	0.9	14,721	64.3	16,288	64.7	0.4
Victory Rd. between Tustin Ranch Rd. and Park Ave.	1,904	56.0	2,078	56.4	2,332	56.9	0.5	2,452	57.1	2,705	57.5	0.4
Victory Rd. between Red Hill Ave. and Armstrong Ave.	691	51.6	4,025	59.2	4,762	60.0	0.8	11,169	63.7	11,906	63.9	0.2

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Warner Ave. between Red Hill Ave. and Armstrong Ave.	13,197	64.6	16,687	65.7	18,035	66.0	0.3	22,892	67.0	24,240	67.3	0.3
Warner Ave. between Armstrong Ave. and Legacy Rd.	10,960	63.8	15,231	65.3	16,713	65.7	0.4	23,209	67.1	24,691	67.4	0.3
Warner Ave. between Legacy Rd. and Tustin Ranch Rd.	7,888	62.4	8,459	62.7	8,647	62.8	0.1	9,684	63.3	9,872	63.4	0.1
Warner Ave. between Tustin Ranch Rd. and Park Ave.	16,754	65.7	18,644	66.1	19,506	66.3	0.2	22,694	67.0	23,556	67.2	0.2
Warner Ave. between Park Ave. and Jamboree Rd.	20,527	66.6	21,588	66.8	22,057	66.9	0.1	23,863	67.2	24,331	67.3	0.1
Warner Ave. between Jamboree Rd. and Harvard Ave.	17,318	65.8	17,749	65.9	18,159	66.0	0.1	18,673	66.2	19,082	66.2	0.0
Park Ave. between Tustin Ranch Rd. and The District	12,147	64.0	13,361	64.4	13,844	64.6	0.2	14,790	64.9	15,272	65.0	0.1
Barranca Pkwy. between Red Hill Ave. and Aston St.	30,169	66.9	32,224	67.2	32,375	67.2	0.0	35,847	67.7	35,998	67.7	0.0
Barranca Pkwy. between Aston St. and Armstrong Ave.	29,137	66.8	30,226	66.9	30,401	66.9	0.0	31,779	67.1	31,954	67.2	0.1
Barranca Pkwy. between Armstrong Ave. and Von Karman Ave.	30,950	67.0	31,785	67.1	31,926	67.1	0.0	32,795	67.3	32,936	67.3	0.0
Barranca Pkwy. between Von Karman Ave. and The District	28,240	66.6	30,063	66.9	30,124	66.9	0.0	33,189	67.3	33,250	67.3	0.0
Barranca Pkwy. between The District and Jamboree Rd.	34,011	67.4	36,360	67.7	36,799	67.8	0.1	41,395	68.3	41,834	68.3	0.0
Barranca Pkwy. between Jamboree Rd. and Harvard Ave.	23,247	65.8	24,050	65.9	24,126	65.9	0.0	25,772	66.2	25,847	66.2	0.0
Alton Pkwy. between Red Hill Ave. and Von Karman Ave.	13,451	64.2	14,783	64.6	14,861	64.7	0.1	17,538	65.4	17,617	65.4	0.0
Alton Pkwy. between Von Karman Ave. and Jamboree Rd.	14,902	64.7	15,355	64.8	15,360	64.8	0.0	16,327	65.1	16,332	65.1	0.0

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Alton Pkwy. between Jamboree Rd. and Harvard Ave.	15,998	65.0	16,666	65.2	16,838	65.2	0.0	17,999	65.5	18,171	65.5	0.0
Red Hill Ave. between Edinger Ave. and Valencia Rd.	21,703	66.3	22,781	66.5	22,965	66.5	0.0	24,358	66.8	24,542	66.8	0.0
Red Hill Ave. between Valencia Rd. and Victory Rd.	23,835	66.7	25,955	67.1	26,753	67.2	0.1	28,946	67.6	29,745	67.7	0.1
Red Hill Ave. between Victory Rd. and Warner Ave.	24,191	66.8	25,374	67.0	25,577	67.0	0.0	26,502	67.2	26,705	67.2	0.0
Red Hill Ave. between Warner Ave. and Carnegie Ave.	23,020	66.6	24,461	66.8	25,014	66.9	0.1	27,098	67.3	27,651	67.4	0.1
Red Hill Ave. between Carnegie Ave. and Barranca Pkwy.	24,300	66.8	25,972	67.1	26,449	67.2	0.1	29,455	67.6	29,933	67.7	0.1
Red Hill Ave. between Barranca Pkwy. and Alton Pkwy.	27,510	67.3	28,434	67.5	28,684	67.5	0.0	30,317	67.8	30,566	67.8	0.0
Armstrong Ave. between Valencia Ave. and Victory Rd.	2,951	58.1	3,836	59.3	3,915	59.4	0.1	5,635	61.0	5,714	61.0	0.0
Armstrong Ave. between Victory Rd. and Warner Ave.	3,210	58.5	4,748	60.2	4,840	60.3	0.1	7,946	62.4	8,037	62.5	0.1
Armstrong Ave. between Warner Ave. and Barranca Pkwy.	4,747	60.2	6,575	61.6	6,783	61.8	0.2	10,493	63.7	10,701	63.7	0.0
Kensington Park Dr. between Edinger Ave. and Valencia Ave.	7,057	61.7	8,497	62.5	8,858	62.7	0.2	10,263	63.3	10,623	63.4	0.1
Tustin Ranch Rd. between Walnut Ave. and Valencia Ave.	33,978	68.0	38,619	68.6	40,145	68.7	0.1	46,230	69.4	47,756	69.5	0.1
Legacy Rd. between Warner Ave. and Tustin Ranch Rd.	3,278	58.3	4,733	59.9	5,569	60.6	0.7	6,676	61.4	7,512	61.9	0.5
Tustin Ranch Rd. between Valencia Ave. and Moffett Dr.	30,381	67.5	32,935	67.9	34,089	68.0	0.1	38,311	68.5	39,464	68.7	0.2
Tustin Ranch Rd. between Moffett Dr. and Victory Rd.	28,663	67.3	31,371	67.7	32,783	67.9	0.2	37,076	68.4	38,487	68.6	0.2

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Tustin Ranch Rd. between Victory Rd. and Warner Av N.	28,485	67.3	30,770	67.6	31,755	67.7	0.1	35,567	68.2	36,552	68.3	0.1
Tustin Ranch Rd. between Warner Ave. N. and Warner Ave. S.	27,493	67.1	29,169	67.4	29,796	67.5	0.1	32,662	67.8	33,289	67.9	0.1
Tustin Ranch Rd. between Warner Ave. S. and Legacy Rd.	20,813	65.9	21,739	66.1	22,123	66.2	0.1	23,623	66.4	24,008	66.5	0.1
Tustin Ranch Rd. between Legacy Rd. and Barranca Pkwy.	23,676	66.5	26,744	67.0	27,581	67.1	0.1	33,220	67.9	34,057	68.0	0.1
The District between Park Ave. and Barranca Pkwy.	8,936	62.7	9,842	63.1	10,375	63.3	0.2	11,003	63.6	11,536	63.8	0.2
Park Ave. between Moffett Dr. and Victory Rd.	1,017	53.3	2,064	56.3	2,520	57.2	0.9	4,308	59.5	4,764	60.0	0.5
Park Ave. between Victory Rd. and Jamboree Rd.	2,996	57.9	3,819	59.0	4,183	59.4	0.4	5,582	60.6	5,947	60.9	0.3
Park Ave. between Jamboree Rd. and Warner Ave.	8,584	62.5	9,991	63.2	10,338	63.3	0.1	13,007	64.3	13,354	64.4	0.1
Park Ave. between Warner Ave. and The District	9,358	62.9	9,977	63.2	10,242	63.3	0.1	11,304	63.7	11,569	63.8	0.1
Jamboree Rd. between Barranca Pkwy. and Alton Pkwy.	48,449	69.1	49,440	69.2	49,964	69.3	0.1	51,562	69.4	52,087	69.5	0.1
Jamboree Rd. between Walnut Ave. and Edinger Ave.	75,334	71.1	76,477	71.1	76,602	71.1	0.0	78,343	71.2	78,469	71.2	0.0
Jamboree Rd. between Edinger Ave. and Warner Ave.	74,989	71.0	75,560	71.1	75,708	71.1	0.0	76,784	71.1	76,931	71.2	0.1
Jamboree Rd. between Warner Ave. and Barranca Pkwy.	59,053	70.0	59,405	70.0	59,577	70.0	0.0	60,160	70.1	60,331	70.1	0.0
Harvard Ave. between Walnut Ave. and Edinger Ave.	7,335	62.1	8,264	62.6	8,359	62.7	0.1	10,256	63.6	10,350	63.6	0.0
Harvard Ave. between Edinger Ave. and Moffett Dr.	5,656	61.0	6,515	61.6	6,619	61.7	0.1	7,903	62.4	8,006	62.5	0.1

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Harvard Ave. between Moffett Dr. and Warner Ave.	11,063	63.9	11,896	64.2	11,970	64.2	0.0	13,227	64.7	13,300	64.7	0.0
Harvard Ave. between Warner Ave. and Barranca Pkwy.	13,193	64.6	13,606	64.8	13,669	64.8	0.0	14,063	64.9	14,126	64.9	0.0
Harvard Ave. between Barranca Pkwy. and Alton Pkwy.	16,038	65.5	16,265	65.6	16,312	65.6	0.0	16,344	65.6	16,392	65.6	0.0
Walnut Ave. between Jamboree Rd. NB and Harvard Ave.	18,677	66.4	19,945	66.7	20,011	66.7	0.0	22,076	67.2	22,142	67.2	0.0
Red Hill Ave. between Sycamore Ave. and Edinger Ave.	28,247	67.4	28,695	67.5	28,935	67.6	0.1	29,510	67.6	29,750	67.7	0.1
Edinger Ave. between Auto Mall Dr. and Newport Ave.	36,326	68.1	42,128	68.7	42,702	68.8	0.1	48,296	69.3	48,869	69.4	0.1
SR-55 between Edinger Ave. and Barranca Pkwy.	268,324	83.4	277,669	83.6	277,763	83.6	0.0	294,346	83.8	294,440	83.8	0.0
Newport Ave. between Edinger Ave. and SR-55 NB Ramp	13,871	64.6	18,081	65.8	18,411	65.8	0.0	21,821	66.6	22,152	66.6	0.0
Newport Ave. between SR-55 NB Ramp and Valencia Ave.	10,183	63.3	12,976	64.3	13,805	64.6	0.3	15,145	65.0	15,974	65.2	0.2
Del Amo Ave. between Newport Ave. and Edinger Ave.	5,374	60.5	5,753	60.8	5,812	60.8	0.0	6,412	61.3	6,470	61.3	0.0
Valencia Ave. between Newport Ave. and Red Hill Ave.	7,706	62.0	9,283	62.9	10,141	63.2	0.3	12,663	64.2	13,521	64.5	0.3
Warner Ave. between Grand Ave. and Red Hill Ave.	19,580	66.1	22,860	66.8	23,505	66.9	0.1	27,660	67.6	28,305	67.7	0.1
Dyer Rd. between Red Hill Ave. and Pullman St.	30,625	68.0	32,663	68.3	33,040	68.4	0.1	36,251	68.8	36,627	68.8	0.0
Moffett Dr. between Harvard Ave. and Park Ave.	3,163	57.3	5,965	60.1	7,251	60.9	0.8	11,971	63.1	13,256	63.5	0.4
Jamboree Rd SB Ramp between Park Ave. and Jamboree Rd. SB.	7,276	60.4	7,746	60.6	8,006	60.8	0.2	8,752	61.2	9,012	61.3	0.1

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Jamboree Rd NB Ramp between Warner Ave. and Jamboree Rd. NB.	10,198	61.8	10,397	61.9	10,585	62.0	0.1	10,824	62.1	11,012	62.2	0.1

ADT = average daily traffic
CNEL= Community Noise Equivalent Level
dBA = A-weighted decibels
Source: Noise and Vibration Impact Analysis (see Appendix C)

IMPACT NOI-2: MODIFIED PROJECT WOULD NOT RESULT IN GENERATION OF EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS.

Less than Significant Impact.

Construction

Construction activities for future development of the proposed residential units included in the Modified Project would include excavation, and grading activities, which have the potential to generate low levels of groundborne vibration. People working in close proximity to the construction could be exposed to the generation of excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Site ground vibrations from construction activities very rarely reach the levels that can damage structures, but they can be perceived in the audible range and be felt in buildings very close to a construction site.

Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration out of all construction activity and equipment needed with a reference velocity of 0.089 in/sec peak particle velocity (PPV) or 87 vibration velocity decibels (VdB) of ground-borne vibration when measured at 25 feet as shown in Table 5.5-11.

Table 5.5-11: Vibration Source Levels for Construction Equipment

Equipment	Reference PPV/Lv at 25 feet	
	Peak Particle Velocity (inches/second)	Approximate Vibration Level (Lv) (VdB) at 25 feet
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer[2]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	0.003	58

[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[2] Equipment shown in bold is expected to be used on site.
µin/sec = microinches per second; ft = foot/feet; in/sec = inch/inches per second; LV = velocity in decibels; PPV = peak particle velocity; RMS = root-mean-square; VdB = vibration velocity decibels
Source: Noise and Vibration Impact Analysis (see Appendix C)

A significant vibration impact related to annoyance would be a vibration level of 78 VdB at residential uses, and a building damage impact could occur if construction activities of the future buildout generate vibration levels which exceed the FTA guidelines vibration threshold of 0.2 PPV in/sec at receiver locations. The primary source of vibration during future construction would be the operation of a bulldozer. As shown on Table 5.5-11, a large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet.

As shown on Table 5.5-12, the vibration levels at the closest sensitive receptors from the center of construction activities of a typical 5-acre site would be 56 VdB, which is below the 78 VdB threshold for annoyance. Therefore, annoyance impacts related to temporary construction vibration would be less than significant.

Table 5.5-12: Construction Vibration Annoyance Levels at Nearest Receptors

Receptor (Location)	Reference Vibration Level (VdB) at 25 ft[1]	Distance (ft) [2]	Vibration Level (VdB)
Residences within 50 Feet of New Infill Sites	87	280	56
The Bowery Mixed-use Development (West of TLSP Area)		370	52

[1] The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with average condition, identified by the distance from the center of construction activities to surrounding structures.
ft = foot/feet
PPV = peak particle velocity
Source: Noise and Vibration Impact Analysis (see Appendix C).

Additionally, as shown on Table 5.5-13, the vibration level at the nearest structures would be 0.031 inch per second PPV at buildings 50 feet from the new infill development sites and 0.007 inch per second PPV at the closest existing offsite sensitive receptors, which is below the FTA vibration threshold of 0.2 PPV inch per second. Therefore, impacts related to building damage during temporary construction vibration would be less than significant.

Table 5.5-13: Construction Vibration Damage Potential at Nearest Receptors

Receptor (Location)	Reference Vibration Level (PPV) at 25 ft[1]	Distance (ft)[2]	Vibration Level (PPV)
Residences within 50 Feet of New Infill Sites	0.089	50	0.031
The Bowery Mixed-use Development (West of TLSP Area)		140	0.007

[1] The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with the peak condition, identified by the distance from the perimeter of construction activities to surrounding structures.
ft = foot/feet
PPV = peak particle velocity
Source: Noise and Vibration Impact Analysis (see Appendix C).

Further, because construction activities are allowed only between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday and 9:00 a.m. to 5:00 p.m. on Saturdays with no activity allowed on Sundays and City-observed federal holidays pursuant to Tustin City Code Chapter 6, Section 4616, vibration impacts would not occur during the more sensitive nighttime hours. Therefore, impacts related to construction vibration would be less than significant, and there would be no increase in the impacts previously identified.

Operation

As described previously, no development is proposed as part of the Modified Project, thus the following analysis considers the future development of residential units associated with buildout of the proposed Modified Project.

Potential vibration impacts associated with the operations of the Modified Project after buildout would be from vehicular traffic such as heavy trucks for residents moving in and out of the units, product deliveries to retail and restaurant uses, and garbage trucks for solid waste disposal. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. However, vibration levels generated from

Project-related traffic on the adjacent roadways by on-road vehicles would not be excessive because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. The residential development contemplated by Modified Project would not generate a considerable level of heavy truck traffic or any other source of vibration. Thus, operational vibration impacts would be less than significant, and there would be no increase in the impacts previously identified.

IMPACT NOI-3: MODIFIED PROJECT WOULD NOT, FOR A PROJECT LOCATED WITHIN THE VICINITY OF A PRIVATE AIRSTRIP OR AN AIRPORT LAND USE PLAN, OR WHERE SUCH A PLAN HAS NOT BEEN ADOPTED, WITHIN TWO MILES OF A PUBLIC AIRPORT OR PUBLIC USE AIRPORT, EXPOSE PEOPLE RESIDING OR WORKING IN MODIFIED PROJECT AREA TO EXCESSIVE NOISE LEVELS.

Less than Significant. Modified Project site is located approximately 1.5 miles northeast of John Wayne Airport. According to Figure 5.5-2, *Airport Noise Contours,* of the John Wayne Airport AELUP, the Modified Project site is not located within the 65 dBA CNEL noise contours (OC Airport Land Use Commission, 2008). No other airports exist within the vicinity of Modified Project. Thus, implementation and development of Modified Project would not result in a safety hazard or exposure to excessive noise for people residing or working in the area, and impacts would be less than significant. There would be no increase in the impacts previously identified.

5.5.7 CUMULATIVE IMPACTS

Cumulative noise assessment considers development of the Modified Project in combination with ambient growth and other development projects within the vicinity of Modified Project area. As noise is a localized phenomenon, and drastically reduces in magnitude as distance from the source increases, only projects and ambient growth in the nearby area could combine with the Modified Project to result in cumulative noise impacts.

Future development of the Modified Project in combination with the related projects would result in an increase in construction-related and traffic-related noise. However, Tustin City Code Chapter 6, Section 4616 requires construction activities to not occur between the hours of 6:00 p.m. and 7:00 a.m. on weekdays, between 5:00 p.m. and 9:00 a.m. on Saturdays, or anytime on Sunday or City-observed federal holidays. Also, construction noise and vibration are localized in nature and decrease substantially with distance. Consequently, in order to achieve a substantial cumulative increase in construction noise and vibration levels, more than one source emitting high levels of construction noise would need to be in close proximity to construction of the future buildout.

Table 5-1, *Cumulative Projects List*, in Section 5, *Environmental Impact Analysis*, lists the cumulative projects and provides their location. The list includes five projects within the City of Santa Ana, fourteen projects within the City of Tustin, and two projects within the City of Irvine. As shown on Figure 5-1, *Cumulative Projects*, one project is located within the Modified Project area (T-2) and one cumulative project is to the east of the Modified Project area (T-3) and could be within hearing distance of future development pursuant to the Modified Project. Cumulative Project No. T-2 proposes 114 single-family residences and 293 multi-family residences that would be consistent with the proposed Modified Project, and not result in a cumulatively considerable noise impact. In addition, cumulative project T-3 consists of a preschool; and other nearby cumulative projects include community college buildings and office buildings, which are consistent with the noise generated by residential uses and would not result in cumulatively considerable increases in ambient noise.

Cumulative construction could result in the exposure of people to the generation of excessive groundborne vibration and noise increases. Although, the timing of future construction activities under the proposed

Modified Project are currently unknown, construction activities for cumulative projects would be reviewed for the potential to result in impacts and be conditioned under typical construction permitting to ensure that impacts would not occur and that adherence to the Municipal Code would occur. Thus, cumulative noise and vibration impacts associated with construction activities would be less than significant.

Cumulative mobile source noise impacts would occur primarily as a result of increased traffic on local roadways due to the Modified Project and related projects within the study area. Therefore, cumulative traffic-generated noise impacts have been assessed based on the contribution of the Modified Project traffic volumes on the roadways in Modified Project vicinity. The increase in noise levels associated with the traffic volumes of the Modified Project were previously identified. As detailed, buildout of the Modified Project would result in noise levels much lower than the 3 dBA threshold. Therefore, Modified Project would not result in a cumulatively considerable impact when combined with existing and future development. Cumulative impacts would be less than significant.

5.5.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- California Code of Regulations, Title 24
- Tustin City Code Section 6-4614 and 6-4615
- City of Irvine Municipal Code Section 6-8-204

Plans, Programs, or Policies

- City of Tustin General Plan Noise Element
- **PPP NOI-1:** Construction Hours. Construction shall comply with Tustin City Code Section 4616, which allows construction activities only between the hours of 7:00 AM and 6:00 PM, Monday through Friday and between 9:00 AM to 5:00 PM on Saturdays, with no activity allowed on Sundays and City-observed federal holidays.

5.5.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Prior to mitigation, Impact NOI-1 would be potentially significant without mitigation. With compliance with existing regulations, Impact NOI-2 would be less than significant. No impact would occur related to Impact NOI-3.

5.5.10 MITIGATION MEASURES

2017 SEIR Mitigation Measures Applicable to the Modified Project

2017 SEIR MM N-3: For new development within the reuse area, the City of Tustin and City of Irvine, as applicable shall ensure that interior and exterior noise levels do not exceed those prescribed by state requirements and local city ordinances and general plans. Plans demonstrating noise regulation conformity shall be submitted for review and approval prior to building permits being issued to accommodate reuse.

Proposed Specific Plan Amendment Project Mitigation Measures

None.

5.5.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact NOI-1 would be less than significant after mitigation.

This is consistent with the findings identified in the FEIS/EIR and the 2017 SEIR for the Adopted Specific Plan. Pursuant to Public Resources Code § 21166 and CEQA Guidelines § 15162, the changes proposed by the proposed Modified Project after incorporation of mitigation measures would not result in any new impacts, or increase the severity of impacts, with respect to noise impacts.

5.5.12 REFERENCES

Airport Land Use Commission for Orange County. (2008, April). *Airport Land Use Commission*. Retrieved from John Wayne Airport Orange County: https://www.ocair.com/about/administration/airport-governance/commissions/airport-land-use-commission/

City of Tustin. (2018). *City of Tustin General Plan*. Retrieved April 2024, from City of Tustin: https://www.tustinca.org/DocumentCenter/View/713/City-of-Tustin-General-Plan-PDF

City of Tustin. (2024). *Chapter 6, Noise Control*. Retrieved from City of Tustin Municipal Code: https://library.municode.com/ca/tustin/codes/code_of_ordinances?nodeId=ART4HESA_CH6NOCO_4617EX

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OC Airport Land Use Commission. (2008). *John Wayne Airport AELUP*. Retrieved from John Wayne Airport Orange County: https://www.ocair.com/about/administration/airport-governance/commissions/airport-land-use-commission/

Tustin Legacy Specific Plan Amendment Final Supplemental Environmental Impact Report, June 2017. Accessed: https://www.tustinca.org/DocumentCenter/View/9285/Supplement-2017

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5.6 Population and Housing

5.6.1 INTRODUCTION

This section examines the existing population, housing, and employment conditions in the City of Tustin, and assesses the Modified Project's potential impacts related to unplanned direct and indirect growth. The demographic data and analysis presented in this section is based, in part, on the following resources:

- *Tustin Legacy Specific Plan Amendment*, as amended in 2017
- *City of Tustin General Plan (including 2021-2029 Housing Element),* adopted November 2018, updated October 2022
- Tustin City Code
- *E-5 City/County Population and Housing Estimates, 1/1/2023*, California Department of Finance (DOF)
- *Demographics and Growth Forecast,* 2024, Southern California Association of Governments (SCAG)

Although evaluation of population, housing, and employment typically involves economic and social, rather than physical environmental issues, population, housing, and employment growth are often precursors to physical environmental impacts. According to Section 15382 of the CEQA Guidelines, "[a]n economic or social change by itself shall not be considered a significant impact on the environment." Socioeconomic characteristics should be considered in an EIR only to the extent that they create adverse impacts on the physical environment.

5.6.2 REGULATORY SETTING

5.6.2.1 Federal Regulations

No federal laws, regulations, or executive orders apply to this Project.

5.6.2.2 State Regulations

California Housing Element Law

California Planning and Zoning Law requires each city and county to adopt a general plan to guide future growth (California Government Code Section 65300). Among other things, the general plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the State level, the California Department of Housing and Community Development (HCD) estimates the relative share of California's projected population growth that would occur in each county based on California Department of Finance (DOF) population projections and historical growth trends. These figures are compiled by HCD in a Regional Housing Needs Assessment (RHNA) for each region of California. Where there is a regional council of governments, HCD provides the RHNA to the council. Such is the case for the City of Tustin, which is a member of the Southern California Association of Governments (SCAG). The council, in this case SCAG, then assigns a share of the regional housing need to each of its cities and counties. The HCD oversees the process to ensure that the council of governments distributes its share of the State's projected housing need.

Regional Housing Needs Allocation

The RHNA is mandated by State housing law as part of the periodic process of updating housing elements of local general plans. State law requires that housing elements identify RHNA targets set by HCD to

encourage each jurisdiction in the state to provide its fair share of very low-, low-, moderate-, and upper-income housing. The RHNA provides a long-term outline for housing within the context of local and regional trends and housing production goals.

SCAG determines total housing need for each city and county in Southern California based on three general factors: 1) the number of housing units needed to accommodate future population and employment growth; 2) the number of additional units needed to allow for housing vacancies; and 3) the number of very low, low, moderate, and above-moderate income households needed. All cities and counties are required to ensure that sufficient sites are planned and zoned for housing, such that area would be available to accommodate the projected housing needs, and to implement proactive programs that facilitate and encourage the production of housing commensurate with its housing needs.

The planning period for the 6th Cycle RHNA as prepared by SCAG is an eight-year period from June 30, 2021, to October 15, 2029. The 6th Cycle RHNA allocated 6,278 housing units to the City of Tustin. The income breakdown of the required housing units is provided in Table 5.6-1.

Table 5.6-1: City of Tustin RHNA by Income Level

Income Level Category	Number of Housing Units	Percent of Total
Very Low (< 50% of AMI)	1,724	25%
Low (50% to 80% of AMI)	1,046	15%
Moderate (80% to 120% of AMI)	1,132	17%
Above Moderate (> 120% of AMI)	2,880	42%
Total	**6,782**	**100%**

Notes: AMI = Area Median Income
Source: (Southern California Associated of Governments, 2021)

SCAG Regional Transportation Plan/Sustainable Communities Strategy

On April 4, 2024, SCAG adopted "Connect SoCal," the 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Connect SoCal integrates transportation planning with economic development and sustainability planning to comply with State greenhouse gas (GHG) emissions reduction goals, such as Senate Bill 375. The RTP/SCS is updated every four years as required by federal and State regulations.

According to the RTP/SCS, by 2050, the population of Southern California is projected to increase by two million people, with an increase of 1.6 million housing units, and 1.3 million jobs. However, growth is not expected to be uniform across the region's counties or cities. During that time, transportation infrastructure will need to substantially expand while also meeting the GHG emissions-reduction targets set by the California Air Resources Board.

SCAG is empowered by State law to assess regional housing needs and provide a specific allocation of housing needs for all economic segments of the community for each of the region's counties and cities. The determination of each city's and county's share of regional housing needs that is required by law to be reflected in municipal general plan housing elements is based on the growth projections of the RTP/SCS.

SCAG Regional Growth Projections

SCAG is responsible for producing socioeconomic forecasts and developing, refining, and maintaining macro and small-scale forecasting models. The forecasts are developed in five-year increments. The current SCAG projections are provided through the year 2045. Consistency with the growth forecast, at the sub-regional

level, is one criterion that SCAG uses in exercising its federal mandate to review "regionally significant" development projects for conformity with regional plans.

SCAG Connect SoCal projects that the number of local employment opportunities in the City of Tustin will increase from 51,700 in 2019 to 71,300 in 2050. Additionally, SCAG projects the City's housing units will increase from 27,000 in 2019 to 34,000 in 2050 (Southern California Association of Governments, 2024).

5.6.2.3 Local and Regional Regulations

General Plan

The following goals and policies from the City's 2021-2029 Housing Element are relevant to the Modified Project.

Goal 1 **Provision of an adequate supply of housing to meet the need for a variety of housing types and the diverse socio-economic needs of all community residents commensurate with the City's identified housing needs in the RHNA allocation.**

Policy 1.1 **Variety of Housing Choices.** Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.

Policy 1.3 **Regulatory Incentives.** Support the use of regulatory incentives, such as density bonuses and deferment of impact fees, to offset the costs of affordable housing while ensuring that potential impacts are addressed.

Policy 1.5 **Smart Growth Principles.** Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for the construction of higher density housing, affordable housing, and mixed-use development (the vertical and horizontal integration of commercial and residential uses) in proximity to employment opportunities, community facilities and services, and amenities.

5.6.3 ENVIRONMENTAL SETTING

5.6.3.1 Population

The SCAG estimates that the City of Tustin had a population of 80,400 persons in 2019 and estimates that the City's population will increase to 93,317 in 2050, which is a 16.1 percent increase.[1] In comparison, the SCAG projects the County of Orange will have a 7.8 percent increase in population between 2019 and 2050, as shown on Table 5.6-2.

Table 5.6-2: City and County Existing and Projected Population, 2019-2050

Year	City of Tustin Population	County of Orange Population
2019	80,400	3,191,000
2050	93,317	3,439,000

[1]The 2050 population estimate was derived using the methodology presented in Section 4.5 of the SCAG Demographics & Growth Forecast which states an estimate of the future City-level population based on Connect SoCal's household forecast can be derived using a county-level Population: Housing ratio from TABLE 12 [of the SCAG document] and applying it to the City's future household growth (Southern California Association of Governments, 2024).

Year	City of Tustin Population	County of Orange Population
Projected Change	+12,919	+248,000
Projected Percent Change	+16.1	+7.8

Source: (Southern California Association of Governments, 2024)

5.6.3.2 Housing

The California DOF estimates that the City of Tustin contained 28,405 housing units in 2023. The housing types in the City of Tustin compared to those in the entire County are provided in Table 5.6-3. As shown, the County has a higher percentage of detached single-family housing units and a lower percentage of single-family attached and multi-family housing units than the City. In addition, the California DOF details that the City had an average household size of 2.88 persons per household. In comparison, the County had an average household size of 2.83 persons per household (California Department of Finance, 2023).

Table 5.6-3: City and County Housing Estimates by Type 2023

	City of Tustin Housing Units		County of Orange Housing Units	
Unit Type	**Number**	**Percent**	**Number**	**Percent**
Single-family detached	9,910	34.9%	570,763	49.6%
Single-family attached	3,944	13.9%	143,166	12.4%
Multi-family (2-4 units)	3,956	13.9%	94,541	8.2%
Multi-family (5+ units)	9,731	34.3%	309,290	26.9%
Mobile Homes	864	3.0%	32,183	2.8%
Total	28,405	100%	1,149,943	100%

Source: (California Department of Finance, 2023)

The California DOF population and housing estimates for 2023 detail that the City of Tustin has a vacancy rate of 3.4 percent. In comparison, the vacancy rate Countywide is higher at 5.1 percent (California Department of Finance, 2023).

As shown in Table 5.6-4, SCAG estimates that between 2019 and 2050, the number of housing units in the City will increase by 25.9 percent while the number of housing units in the County will increase by 17.2 percent.

Table 5.6-4: City and County Existing and Projected Housing Units, 2019-2050

Year	City of Tustin Housing Units	County of Orange Housing Units
2019	27,000	1,069,000
2050	34,000	1,253,000
Projected Change 2019-2050	7,000	184,000
Projected Percent Change 2019-2050	25.9	17.2

Source: (Southern California Association of Governments, 2024)

5.6.3.3 Employment

The City of Tustin is estimated to contain 51,700 employment opportunities as of 2019. The SCAG regional growth projections anticipate the number of jobs in the City of Tustin to increase by 37.9 percent to 71,300 jobs in the year 2050. In comparison, the County is projected to see an 11.9 percent increase in the number of jobs by 2050, as shown in Table 5.6-5.

Table 5.6-5: City and County Existing and Projected Employment, 2019-2050

Year	City of Tustin Employment	County of Orange Employment
2019	51,700	1,805,000
2050	71,300	2,019,000
Projected Change 2019-2050	19,600	214,000
Projected Percent Change 2019-2050	37.9	11.9

Source: (Southern California Association of Governments, 2024)

The SCAG 2019 Local Profile for Tustin identifies that 7.3 percent of Tustin residents work and live in the City, while 92.7 percent commute to other places (Southern California Association of Governments, 2019). Of the commuters residing in Tustin, the largest percentage commute to the City of Irvine (18.6 percent), Santa Ana (10.4 percent), Anaheim (5.5 percent), and Orange (5.2 percent).

Jobs – Housing Ratio

The jobs-housing ratio is a general measure of the total number of jobs and housing units in a defined geographic area, without regard to economic constraints or individual preferences. SCAG applies the jobs-housing ratio at the regional and subregional levels to analyze the fit between jobs, housing, and infrastructure. A major focus of SCAG's regional planning efforts has been to improve this balance. SCAG defines the jobs-housing balance as follows:

> *Jobs and housing are in balance when an area has enough employment opportunities for most of the people who live there and enough housing opportunities for most of the people who work there. The region as a whole is, by definition, balanced…. Job-rich subregions have ratios greater than the regional average; housing-rich subregions have ratios lower than the regional average. Ideally, job-housing balance would… assure not only a numerical match of jobs and housing but also an economic match in type of jobs and housing.*

There is no ideal ratio adopted in State, regional, or city policies. However, the American Planning Association recommends a target ratio of 1.5 jobs per housing unit; communities with more than 1.5 jobs per dwelling unit are considered "jobs rich;" those with fewer than 1.5 are "housing rich," meaning that more housing is provided than employment opportunities in the area (Weitz, 2003). A job-housing imbalance can indicate potential air quality and traffic problems associated with commuting. Table 5.6-6 provides the projected jobs-to-housing ratios for the City, based on SCAG's 2024-2050 RTP/SCS.

Table 5.6-6: Jobs – Housing Trends in the City of Tustin

	Employment in 2019	Number of Dwelling Units in 2019	2019 Jobs to Housing Ratio	Employment in 2050	Number of Dwelling Units in 2050	2050 Jobs to Housing Ratio
City of Tustin	51,700	27,000	1.91	71,300	34,000	2.1
County of Orange	1,805,000	1,069,000	1.67	2,019,000	1,253,000	1.61

Source: (Southern California Association of Governments, 2024)

As shown on Table 5.6-6, the projected 2050 jobs-to-housing ratios for the City of Tustin and Orange County are 2.1 and 1.61, respectively. This indicates that both the City of Tustin and Orange County are anticipated to be jobs-rich, similar to the 2019 data. Therefore, it is possible that people employed in the City of Tustin are commuting from elsewhere.

5.6.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

POP-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

POP-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The Initial Study (Appendix A) established that the Modified Project would not result in impacts related to Threshold POP-2; therefore, no further assessment of this threshold is required in this Draft SEIR.

5.6.5 METHODOLOGY

CEQA Guidelines Section 15064(e) states that a social or economic change generally is not considered a significant effect on the environment unless the changes can be directly linked to a physical adverse change. Additionally, CEQA Guidelines Appendix G indicates that a project could have a significant effect if it would induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). Therefore, population impacts are considered potentially significant if growth associated with the Modified Project would exceed projections for the area and if such an exceedance would have the potential to create a significant adverse physical change to the environment.

The methodology used to determine population, housing, and employment impacts began with data collection regarding existing population and housing trends, which was obtained from the U.S. Census, state of California DOF, and SCAG. Population and household data was derived from the 2023 DOF Estimates, as this was the available dataset at the time the NOP was released. The DOF benchmarked all 2023 population and housing estimates to the 2020 decennial census. SCAG projections were used to analyze long term population, household, and employment growth. U.S. Census data was used to capture the current employment statistics in the City of Tustin. If projected growth with the Project would exceed growth projections for the City and could create a significant change to the environment, the resulting growth would be considered "substantial," and a significant impact would result.

5.6.6 ENVIRONMENTAL IMPACTS

Summary of Previous Environmental

The certified FEIS/EIR found that development of the Adopted Specific Plan would have resulted in a total population of 12,514, (10,900 in Tustin), resulting in a net population increase of approximately 9,350 persons. The FEIS/EIR analyzed the demolition of the barracks units and conversion to civilian use. Buildout of the Adopted Specific Plan allowed 4,601 residential units, including the 1,537 converted or replaced units. In addition, the FEIS/EIR found that buildout would have resulted in about 24,500 net new jobs, or a net increase of approximately 24,500 jobs. In addition, the Project was expected to generate 15,081 indirect jobs. The FEIS/EIR concluded that the increase in population, housing, and employment due to the implementation of the Adopted Specific Plan was a beneficial impact because it would fulfill an identified shortfall in housing and meet the goals of the Project to generate jobs.

The FEIS/EIR determined that there would be no adverse impact related to the jobs/housing balance. It was determined that the majority of new jobs would be filled by existing residents within Orange County, and

enough new housing would be provided for employees residing outside of the County. No significant impact was identified.

The 2006 Addendum updated the demographic data and growth projections for the City of Tustin and County of Orange using the 2004 Orange County Projections (Center for Demographics Research, 2004). The OCP 2004 projections include buildout projections assumed for the Adopted Specific Plan. The changes in projections showed an increase in population and employment in Tustin with a slightly lower housing stock, indicating a larger household size.

The 2006 Addendum determined that there would be a reduction of 879 employees and an increase of 21 residential units and 24 residents. The 2006 Addendum determined that these small changes in employment, housing, and population would not result in any new significant impacts. Further, the Project would have a similar impact on the jobs/housing balance countywide.

The 2017 TLSP SPA was anticipated to result in the construction of 6,813 residential units and 9,532,419 square feet of nonresidential building space. The 2017 TLSP SPA was therefore found to result in an overall increase of 2,212 dwelling units and a decrease of 1,755,306 square feet of building space. The 2017 SEIR determined that buildout of the 2017 TLSP SPA would increase the Project area's population by an estimated 6,526 additional residents compared to the Adopted Specific Plan, which was estimated to generate 9,374 residents. This represents an increase of 69.6 percent increase from the Adopted Specific Plan. The additional 6,526 residents that would be generated in Tustin upon buildout of the Modified Project would exceed the amount of growth anticipated to occur in the City by regional projections: 4,616 more residents than CDR projections for 2035, 4,394 more residents than SCAG's projection for 2035, and 4,494 more residents than SCAG's projection for 2040. Furthermore, additional residents generated by the Modified Project compared to those generated by the Adopted TLSP would represent 79.5 percent of the population growth anticipated for buildout of the City by the Tustin General Plan. Based on all three of these metrics, the Modified Project would induce substantial growth in the area beyond that studied in the Certified EIR. However, Orange County remains a jobs-rich region, and housing proposed by the Modified Project would result in a beneficial impact to the region related to the balance of jobs and housing. The 2017 SEIR also determined that buildout of the 2017 TLSP SPA would result in a jobs-housing ratio of 2.76 (18,802 total jobs). Although both scenarios are exceptionally jobs-rich, the 2017 TLSP SPA was found to be substantially more balanced than the Adopted TLSP, which had a jobs-housing ratio of 5.11 (23,621 total jobs). The 2017 SEIR determined that the comparatively more housing-rich 2017 TLSP SPA is consistent with SCAG's intent to place more housing in jobs-rich portions of Orange County, which is jobs-rich. Implementation of the 2017 TLSP SPA was found to result in a less-than-significant impact relating to population growth.

IMPACT POP-1: THE PROJECT WOULD NOT INDUCE SUBSTANTIAL UNPLANNED POPULATION GROWTH IN AN AREA, EITHER DIRECTLY (FOR EXAMPLE, BY PROPOSING NEW HOMES AND BUSINESSES) OR INDIRECTLY (FOR EXAMPLE, THROUGH EXTENSION OF ROADS OR OTHER INFRASTRUCTURE).

Less than Significant.

This threshold was previously addressed within the 2017 TLSP SPA SEIR under threshold P-1. Impacts were determined to be less than significant.

Population Growth

As shown in Table 3-2, *Specific Plan Amendment Summary*, in Section 3, *Project Description*, of this DSEIR, implementation of the Approved Project would result in the construction of 4,486 residential units and 3,248,890 square feet of nonresidential building space. The proposed Modified Project proposes a total capacity of 6,697 residential units and 3,248,890 square feet of nonresidential capacity within the TLSP

area. The difference between these two scenarios represents an overall increase of 2,211 dwelling units. However, the Modified Project also includes 2,759 density bonus units. Buildout of the Modified Project with density bonus units would result in a total development capacity of 9,456 dwelling units within the TLSP area. The difference between the Approved Project and Modified Project with density bonus units it 4,970 dwelling units.

The Modified Project would permit development of a net increase of 4,970 dwelling units compared to the Approved Project. The DOF estimates that the City of Tustin had an average household size of 2.88 persons and a vacancy rate of 3.4 percent in 2023 (California Department of Finance, 2023). Thus, the average number of persons per housing unit in the City of Tustin in 2023 is estimated as the average household size (2.88 persons) times the occupancy rate (96.6 percent), or 2.78 persons. Using this persons per household estimate, buildout of the Modified Project would result in approximately 13,817 additional residents compared to the Approved Project (as amended in 2019) which was estimated to generate 17,242 residents.[2] Therefore, with addition of the Modified Project, the total population of the TLSP buildout is estimated at 31,059 residents.

Table 5.6-7 shows estimated buildout populations for the Approved Project and Modified Project, as well as projections for the City of Tustin prepared by the Center for Demographic Research (CDR) at California State University, Fullerton and SCAG.

Table 5.6-7: Estimated Population Growth for the Approved Project and Modified Project

Scenario			Number of Residents
Project Area	Approved Project (per 2019 Addendum)		17,242
	Modified Project	Population Generated by Additional Units	13,817
		Total Population	31,059
City of Tustin	Existing Conditions (2023)		79,558
	CDR Projections (2023)	2025	81,120
		2030	96,409
		2035	95,615
		2040	95,210
		2045	94,119
		2050	92,330
	SCAG Projections (2024)	2050	93,317
	Tustin General Plan (2018)	Buildout	104,312

Source: (California Department of Finance, 2023) (California State University Fullerton, 2023) (Southern California Association of Governments, 2024) (City of Tustin, 2018)

As shown in Table 5.6-7, SCAG forecasts that Tustin's population will be 93,317 in 2050. Similarly, CDR estimates Tustin's population will be 92,330 in 2050. The additional 13,817 residents that would be generated in the City through buildout of the Modified Project would exceed the amount of growth anticipated by the CDR in the year 2050 by 1,045. Additionally, anticipated buildout of the Modified Project would exceed the amount of growth anticipated by SCAG in the year 2050 by 58. The residents

[2] This number was calculated by adding the projected number residents analyzed in the 2017 TLSP SEIR (15,900 residents) and the residents that would be generated from the additional 471 units added to the TLSP through the 2019 addendum. The additional residents that would be generated through buildout of the additional 471 residences was calculated by using 2019 estimates from the DOF which found that the average persons per household in the City in 2019 was 3.0 and the occupancy rate was 95.1.

anticipated by the Modified Project would not exceed CDR projections for 2025 through 2045. Residents that would be generated through buildout of the Modified Project would represent approximately 13 percent of the population growth anticipated for buildout of the City by the Tustin General Plan. Thus, while the Project would result in an increase in population in the TLSP Area, the increase in population and number of housing units that would result from the Modified Project would not exceed projections for the City except CDR and SCAG projections for the year 2050.

Further, as reflected in Table 5.6-1, SCAG determined the City needs to provide a total of 6,782 housing units to meet their RHNA. Thus, while the Modified Project would result in an increase to projected planned population, the Project would in part satisfy the State requirements to provide new housing opportunities to increase housing supply. Additionally, the Modified Project supports the goals and policies of the Housing Element (see page 5.6-3) aimed to support a variety of housing types and densities.

Jobs-Housing Balance. For purposes of this analysis, the study area is considered the entire TLSP area, rather than the focused Modified Project site. Effects of the Modified Project on jobs-housing balance are evaluated by adding project-generated jobs and housing units to forecasts of employment and housing. As described previously, the City of Tustin is job rich, with an existing jobs-housing ratio of 1.91. The Modified Project would reduce (improve) the jobs-housing ratio slightly by adding 4,970 residential units. The Modified Project would provide a regional beneficial effect of providing the opportunity for housing on the Project site in a jobs-rich area, where employees can easily travel to nearby employment opportunities.

Table 5.6-8 shows the jobs-housing ratio of buildout of the Modified Project compared to buildout of the Approved Project. As shown, buildout of the Modified Project would result in a jobs-housing ratio (within the Project area) of 2.08 while buildout of the Approved Project would result in a jobs-housing ratio of 2.76. Thus, while both scenarios are considered jobs-rich, the Modified Project is more housing-rich and closer to balanced conditions.

Table 5.6-8: Project Area Jobs – Housing Ratio

	Jobs[1]	Units[2]	Jobs-Housing Ratio
Approved Project	18,802	6,813	2.76
Modified Project	18,802	9,024	2.08

Notes: [1] Assumes 507 square feet per employee (The Natelson Company, 2001).
[2] The Modified Project number of units does not take into account potential density bonus units.

Table 5.6-9 compares housing and employment for the City of Tustin under the Approved Project and Modified Project to SCAG's projections for the City. As shown in the table, buildout of both project scenarios would result in a more housing-rich community compared to existing conditions. The SCAG estimates indicate that the City is anticipated to become more jobs-rich in the future.

Table 5.6-9: City of Tustin Jobs – Housing Ratio

	Jobs	Units	Jobs-Housing Ratio
Existing Conditions	40,900	28,405	1.44
Existing Conditions plus Approved Project	47,308	33,362	1.42
Existing Conditions plus Modified Project	47,308	35,102	1.35
SCAG Projections (2020)	71,300	34,000	2.09

Source: (California Employment Development Department, 2023), (California Department of Finance, 2023), (Southern California Association of Governments, 2024)

Table 5.6-10 compares housing and employment for Orange County under the Approved Project and Modified Project to SCAG's projections for the City. As shown in the table, buildout of both project scenarios

would not affect the jobs-housing balance of the County. The SCAG estimates indicate that the County is anticipated to become more jobs-rich in the future.

Table 5.6-10: Orange County Jobs – Housing Ratio

	Jobs	Units	Jobs-Housing Ratio
Existing Conditions	1,539,300	1,149,943	1.34
Existing Conditions plus Approved Project	1,545,708	1,154,429	1.34
Existing Conditions plus Modified Project	1,545,708	1,156,640	1.34
SCAG Projections (2050)	2,019,000	1,253,000	1.61

Source: (California Employment Development Department, 2023), (California Department of Finance, 2023)

Similarly to the Approved Project, implementation of the Modified Project would directly and indirectly induce population growth in the TLSP area and would slightly skew the jobs-housing ratio towards a more housing-rich ratio. However, the purpose of the Modified Project is to implement the provisions of the City's 2021-2029 Housing Element in order to ensure the City can meet their required RHNA as specified by the HCD and SCAG. Further, the Modified Project supports goals and policies of the Housing Element aimed to support a variety of housing types and densities. Additionally, as identified in Table 5.4-2, *Project Consistency with 2024 SCAG Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy Policies*, in Section 5.4, *Land Use and Planning*, of this DSEIR, implementation of the Modified Project would be consistent with applicable goals of the 2024-2050 RTP/SCS, including SCAG's intent to increase housing in jobs-rich portions of Orange County, which as a whole is jobs-rich. Therefore, implementation of the Modified Project would result in a less-than-significant impact related to population growth.

5.6.7 CUMULATIVE IMPACTS

As described in the analysis above, implementation of the Modified Project would induce population and housing unit growth within the City of Tustin and Orange County. However, the growth anticipated from the Modified Project would not exceed the SCAG population or housing growth projections for the City and would represent a nominal percentage of SCAG's overall projections for the City of Tustin. Further, while the Modified Project would make the TLSP area more housing-rich than the Approved Project, the Modified Project would not have a significant impact on the County's overall balance of jobs and housing. Therefore, impacts related to cumulative growth would be less than significant and not cumulatively considerable.

5.6.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

California Government Code Sections 65300, 65580–65589

Plans, Programs, or Policies

None.

5.6.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact POP-2 would be less than significant.

5.6.10 MITIGATION MEASURES

No mitigation measures are required.

5.6.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant and unavoidable adverse impacts related to population and housing would occur.

5.6.12 REFERENCES

California Department of Finance. (2023, May). *E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2021-2023*. Retrieved from State of California Department of Finace.

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5.7 Public Services

5.7.1 INTRODUCTION

This section describes the existing fire protection, police protection, schools, and library facilities that serve the Project site and vicinity and evaluates the potential for implementation of the proposed Project to result in impacts to these facilities. This section of the EIR addresses whether there are physical environmental effects of new or expanded facilities that are necessary to maintain acceptable service levels related to fire, police, schools, and library services.

Impacts related to park services were determined to be less than significant through preparation of the Initial Study (Appendix A); therefore, park services are not addressed in this SEIR. Public utilities and service systems, including water, wastewater, drainage, and solid waste, are addressed in Section 5.10, *Utilities and Service Systems*.

Information within this section is based on the following:

- *Tustin Legacy Specific Plan Amendment*, as Amended in 2017
- *City of Tustin General Plan (including 2021-2029 Housing Element),* adopted November 2018, updated October 2022.
- Tustin City Code
- Data provided by each service provider

Because CEQA focuses on physical environmental effects, this section analyzes whether any physical changes resulting from an increase in service demands from development pursuant to the proposed Project could result in significant adverse environmental effects. Thus, an increase in staffing associated with public services, or an increase in calls for services, would not, by itself, be considered a physical change in the environment. However, physical changes in the environment resulting from the construction of new facilities or an expansion of existing facilities to accommodate the increased staff or equipment needs resulting from the proposed Project could constitute a significant impact.

5.7.2 FIRE PROTECTION SERVICES

5.7.2.1 Fire Protection Services Regulatory Setting

California Fire Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which include regulations concerning building standards (as also set forth in Title 24, Part 9 of the California Code of Regulations, the California Building Code), fire protection and notification systems, fire protection devices (such as extinguishers and smoke alarms), building evacuation and access standards, and fire suppression training.

California Health and Safety Code

Additional State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Fighting Equipment," California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire house sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Orange County Fire Authority Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development

The Orange County Fire Authority (OCFA) Fire Prevention Guideline B-09 requires new structures to meet standards related to access driveways, siting of hydrants, water supply, and building access, as required by the California Fire Code. The guideline requires specific information be provided during the submittal of plans for development projects to demonstrate compliance with all codes and other regulations governing water availability for firefighting and emergency access to sites and structures within the jurisdictions served by the OCFA. In addition, the guideline requires that plans be reviewed by the OCFA.

City of Tustin General Plan

The City's General Plan Public Safety Element contains the following goals and policies related to fire services.

Goal 5 **Reduce the risk to the community's inhabitants from fires or explosions.**

Policy 5.1 Work closely with the Orange County Fire Authority to continue to operate an education program regarding fire hazards.

Policy 5.2 Encourage the use of fire retardant roofing materials.

Policy 5.3 Establish and maintain mutual aid agreements with surrounding jurisdictions for fire protection.

Policy 5.4 Enforce building code requirements that assure adequate fire protection.

Policy 5.5 Study alternatives for upgrading emergency water line capacities in deficient areas.

Policy 5.6 Cooperate with Orange County Fire Authority to ensure the provision of adequate and cost-effective fire protection services.

Tustin City Code

Chapter 8100 – Building and Construction Codes Adopted by Reference. The Tustin Code of Ordinances adopts the California Fire Code as published by the California Building Standards Commission and the International Code Council by reference. The California Fire Code is Title 24, Part 9 of the California Code of Regulations, and regulates new structures, alterations, additions, changes in use or changes in structures. The Code includes specific information regarding safety provisions, emergency planning, fire-resistant construction, fire protection systems, means of egress and hazardous materials.

5.7.2.2 Fire Protection Services Environmental Setting

Fire protection and emergency medical services in the City of Tustin are provided by the OCFA through a contract for services. The OCFA provides fire suppression, emergency medical, rescue, fire prevention, hazardous materials coordination, and wildland management services. The OCFA serves 23 cities in Orange County and all unincorporated areas. Within the City of Tustin, the OCFA provides services from three fire stations.

The primary responsibility area for the Project site is split between Station 37 and Station 6 (T. Rivers, personal communication, April 8, 2024). Station 37 is located within the TLSP area, southwest of the intersection of Edinger Avenue and Kensington Park Drive. Station 6 is located adjacent to the southern portion of the TLSP along Barranca Parkway in Irvine. The location, equipment, and staffing of Station 37 and Station 6 are provided in Table 5.7-1.

Table 5.7-1: Location, Staffing, and Equipment for Station 37 and Station 6

Fire Station	Location	Distance from Site	Equipment	Staffing
Station 37	15011 Kensington Park Drive, Tustin, CA 92780	Located within TLSP	-Division 4 -Medic Engine 37	Daily Staffing: -1 Division 4 Chief -1 Fire Captain -1 Fire Apparatus Engineer -2 Firefighters Total Station Staffing: 13
Station 6	3180 Barranca Pkwy, Irvine, CA 92606	300 feet	-Battalion 5 -Heavy Rescue 6 -Medic Engine 6	Daily Staffing: -1 Battalion Chief -2 Fire Captains -2 Fire Apparatus Engineers -4 Firefighters Total Station Staffing: 27

As provided by the OCFA 2022 Statistical Annual Report, there were 6,449 incident totals from the three fire stations in the City (Station 21, Station 37, and Station 43) in 2022 (Orange County Fire Authority, 2022). Of the calls for service, 76.8 percent (4,953) were for emergency medical calls, 1.4 percent (93) were for fire incidents, and 28.3 percent (1,403) were for other incidents, including cancelled service calls, ruptures, hazardous conditions, false alarms, and miscellaneous calls.

According to Table PS-3, *Emergency Service Standards*, of the Tustin General Plan, Tustin has a target response time of 5 minutes for 90 percent of incidents related to fire response and basic life support unit responses. The standard response time for the advanced life support unit is 10 minutes for 90 percent of incidents (City of Tustin, 2018).

The OCFA standard for first-due response is 8:30 minutes at the 90th percentile. First-due refers to the fire department that is responsible for responding to an emergency call in a specific area. The standard response time for the effective response force (initial response of three engines, one ladder truck and one Battalion Chief) is 11.5 minutes at the 90th percentile. Table 5.7-2 provides a summary of service and response metrics for the responding stations to the Project site (Station 37 and Station 6) in 2023. As shown, in 2023 the 90th percentile response time was 8:51 minutes for Station 37 and 8:18 minutes for Station 6.

Table 5.7-2: OCFA Station 37, 21, and 43 Calls for Service and Response Data – 2023

Fire Station	Emergency Medical Calls	Fire Calls	Other Calls	Total Calls for Services	90th Percentile Response (min:second)
Station 37	1,544	33	533	2,111	8:51
Station 6	1,440	28	554	2,022	8:18

Source: Rivers, 2024

5.7.2.3 Fire Protection Services Thresholds of Significance

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

5.7.2.4 Fire Protection Services Methodology

The potential impacts related to fire protection services were evaluated based on the ability of existing fire department staffing, equipment, and facilities to meet the additional demand for fire protection and emergency medical services resulting from implementation of the proposed Project. Impacts are considered significant if implementation of the proposed Project would result in inadequate staffing levels, response times, and/or increased demand for services that would require the construction or expansion of new or altered facilities that might have an adverse physical effect on the environment. For fire services, a significant impact could occur if the proposed Project generated the need for additional personnel or equipment that could not be accommodated within the existing stations and would require the construction of a new station or an expansion of an existing station.

5.7.2.5 Fire Protection Services Environmental Impacts

Summary of Previous Environmental Impacts

The certified FEIS/EIR determined that implementation of the Specific Plan would require additional firefighting personnel and equipment at existing fire stations. However, it found that buildout would not require new or expanded fire stations. All development projects would be required to meet Orange County Fire Authority (OCFA) regulations, and impacts were determined to be less than significant. Additionally, the FEIS/EIR included implementation measures which required coordination between future developers/applicants and the City of Tustin or the City of Irvine, depending on the development site's jurisdiction, to provide adequate fire protection facilities.

Subsequent to the certification of the FEIS/EIR, in May 2003, the Navy Disposal Plan transferred to the City of Tustin a 1.25-acre site at Edinger Avenue and the West Connector for construction of a new fire station. The fire station was to be funded through development in Tustin Legacy and in the City of Irvine within the former Marine Corps Air Station (MCAS) Tustin.

Subsequently, the OCFA re-evaluated its need for fire protection facilities with respect to response times and determined it needed to move Station 37 to a new location in the Specific Plan area. In March 2005, the City entered into a Memorandum of Understanding with the OCFA for a new fire station at Tustin Legacy.

The 2006 Addendum found that the project would place a similar demand for fire protection services as the original project and that the fire station proposed in the Specific Plan area would meet the needs of the

project. As determined by the FEIS/EIR, future projects would be required to comply with all OCFA regulations.

At the time that the 2017 TLSP SPA was approved, OCFA Fire Station 37 at Edinger Avenue and Kensington Park Drive had been completed. The 2017 TLSP SPA was anticipated to result in an increase of 2,212 residential units and a decrease of approximately 1.7 million square feet of nonresidential uses. Although the project would result in an increase in demand for fire protection due to the resulting increase of 6,371 residents, there would be a decrease of 1.7 million square feet of nonresidential uses offsetting the increase in demand. With the construction of the new fire station (Station 37) within the TLSP area, the 2017 SEIR Initial Study found that no other new or expanded off-site fire protection facilities were determined to be required (2017 TLSP Initial Study, p. 82). The 2017 TLSP SPA was required to meet OCFA regulations and standard conditions. No new significant impacts were identified.

Existing Conditions

The TLSP continues to be served by the OCFA. Prior to adoption of the 2017 SEIR, the OCFA and the City completed construction of Fire Station 37 in 2014, located at 15011 Kensington Park Drive, which serves the TLSP area. No changes to facilities have been made since adoption of the 2017 TLSP SPA.

Modified Project Environmental Impacts

IMPACT PS-1: THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED FIRE PROTECTION SERVICE FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS, IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS AND RESPONSE TIMES OR OTHER PERFORMANCE OBJECTIVES FOR FIRE PROTECTION SERVICES.

This threshold was previously addressed within Section 5.14 of the Initial Study prepared for the 2017 TLSP SPA SEIR under threshold (a). Impacts were determined to be less than significant.

Less than Significant Impact with Mitigation. The proposed Project is an SPA which would amend Neighborhoods D South, D North, and G to increase the allowed residential capacity to be consistent with the 2021-2029 Housing Element Update. No development is proposed as part of this Project; however, the proposed maximum residential capacity would be 2,211 dwelling units, plus the potential for 2,759 density bonus units, for a total of 4,970 dwelling units.

Construction and operation of future residential development as a result of the proposed Project would increase demands for fire protection and emergency medical services over the existing site condition. As described in Section 5.6, *Population and Housing*, of this SEIR, buildout of the Modified Project would increase the Project area's population by an estimated 13,817 additional residents. The increased residential population is expected to create the typical range of service calls to OCFA, largely related to medical emergencies. Medical emergencies accounted for 76.8 percent of OCFA service calls in Tustin during 2022, while fire calls consisted of 1.4 percent of service calls (OCFA 2022).

As described above in Section 5.7.2.2, *Fire Protection Service Environmental Setting*, the Project site's primary responsibility area is split between Station 37 and Station 6. Station 37 is located within the TLSP and Station 6 is located adjacent to the TLSP. The existing 90th percentile on-scene response time for emergency calls from Station 37 is 8:51 minutes, which slightly exceeds the response time standard 90th percentile of 8:30 minutes. The existing 90th percentile response time for emergency calls from Station 6 is 8:18 minutes, which is within the response time standard.

While there is no specific development proposed as part of this Project, approval of the Modified Project would allow up to 4,970 additional residential units, for a total buildout capacity of 9,456 residential units within the TLSP. Therefore, calls for service from the future additional population at the Project site could result in an increase in response times, and result in Station 6 exceeding the existing standards for service or result in Station 37 further exceeding the existing standards for service, if the calls coincide with other calls for service.

Fire vehicles, equipment, and expansion of existing facilities in the TLSP area are funded partially through collection of special taxes associated with Community Facilities Districts (CFDs). Most of the existing CFD within TLSP collect taxes that fund both facilities (Tax A) and services (Tax B). All currently undeveloped properties within the TLSP are part of, or will be annexed into, CFD No. 2018-01 (City Council Resolution No. 18-15). CFD 18-01 collects funds for services (Tax B) as authorized under Government Code Section 53313, including but not limited to police services; fire services; ambulance and paramedic services; recreation programs; maintenance of parks, parkways and open spaces; flood and storm protection; and street and sidewalk maintenance.

However, the majority of the funds for facilities, equipment, and service personnel come from the City's General Fund. Funding from property taxes, as a result of population growth, would be expected to grow roughly proportional to any increase in residential units and businesses in the City. Therefore, the additional demand for fire services and protection generated by the proposed Project would be satisfied through the General Fund.

Additionally, future development as a result of the proposed Project would be developed pursuant to the most recent California building and fire codes, which would improve the fire safety of the Project site compared to the existing buildings. California's building/fire codes are published in their entirety every three years and were most recently updated in 2022. As all projects within the City, the proposed Project would be required per City permitting to comply with existing regulations, including the 2022 California Fire Code and the OCFA Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development, which include regulations for water supply, built in fire protection systems, adequate emergency access, fire hydrant availability, and fire-safe building materials, such as the following:

- Structures would have automatic fire sprinkler systems per National Fire Protection Association Standard for the Installation of Sprinkler Systems (NFPA 13) as required by the California Building and Fire Codes.
- A fire alarm system would be installed per the requirements of the California Fire Code.
- Access to and around structures would meet OCFA and California Fire Code requirements.
- A water supply system to supply fire hydrants and fire hydrant spacing would meet OCFA and California Fire Code requirements.
- Turning radius and access in and around the Project site and buildings would be designed to accommodate large fire department vehicles and their weight per OCFA Fire Prevention Guideline B-09.
- All electrically operated gates shall install emergency opening devices as approved by the OCFA.
- High rise provisions would be required for buildings over 75 feet high.
- Occupancy permits are required prior to occupancy of any part of the proposed Project.

Further, consistent with the Approved Project, the proposed Project includes Implementation Measures (m), (o), (p), (q), and (r). Implementation Measure (m) requires the City of Tustin and the City of Irvine, each within its respective jurisdiction, to ensure that adequate fire protection are provided. This can be done by requiring applicants for private development projects to enter into an agreement with City of Tustin or the City of Irvine, as applicable, to establish a fair share mechanism to provide needed fire protection services, through the use of fee schedules, assessment district financing, Community Facility District financing, or other mechanisms as determined appropriate by each respective city. Implementation Measure (o) requires future

developers to enter into an agreement with the City of Tustin or City of Irvine/OCFA, if needed and as applicable, to address impacts of the project on fire services. Implementation Measure (p) requires that prior to issuance of building permits, future project developers coordinate with the OCFA to ensure that adequate fire protection measures are implemented in the project. Implementation Measure (q) applies to phased projects and requires the project developer to submit a construction phasing plan to the OCFA demonstrating that emergency vehicle access is adequate. Implementation Measure (r) requires future project developers to submit a fire hydrant location plan for the review and approval of the Fire Chief and ensure that fire hydrants capable of flows in amounts approved by the OCFA are in place and operational to meet fire flow requirements.

Overall, impacts related to fire protection services would be less than significant with implementation of Implementation Measures (Mitigation Measures) from the Approved Project.

5.7.2.6 Cumulative Impacts

The geographic context for cumulative fire protection and emergency services is the OCFA service area. Like the proposed Project, cumulative projects in the City would be reviewed by City and OCFA staff prior to permit approval to ensure that the projects implement fire protection design features per the California Building Code and the California Fire Code, which are intended to reduce risk of fire and impacts on fire protection services. Additionally, cumulative development would be subject to payment of DIFs to offset their respective increases in demand for fire and emergency services. Further, property and sales tax collected from cumulative projects would increase the City's General Fund in rough proportion to population increases, providing funding for any improvements necessary to maintain adequate fire protection facilities, equipment, and/or personnel. Therefore, cumulative impacts associated with fire services would be less than cumulatively considerable.

5.7.2.7 Fire Protection Services Existing Standard Conditions and Plans, Programs or Policies

The following standard regulations would reduce potential impacts related to fire protection services:

- OCFA Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development.
- Tustin City Code, Chapter 8100, Building and Construction Codes Adopted by Reference.

5.7.2.8 Fire Protection Service Level of Significance Before Mitigation

Impact PS-1 would be potentially significant.

5.7.2.9 Fire Protection Services Mitigation Measures

Adopted FEIR/EIS Implementation Measures Applicable to the Project

(m). General. The City of Tustin and the City of Irvine, each within its respective jurisdiction, shall ensure that adequate fire protection, police protection, libraries, and parks and recreation facilities (including bikeways/trails) needed to adequately serve the reuse plan area shall be provided, as necessary. To eliminate any negative impact the project could have on each community's general fund, financing mechanisms including but not limited to developer fees, assessment district financing, and/or tax increment financing (in the event that a redevelopment project area is created for the site), shall be developed and used as determined appropriate by each City. Specifically:

1. Applicants for private development projects shall be required to enter into an agreement with City of Tustin or the City of Irvine, as applicable, to establish a fair-share mechanism to provide needed fire and police protection services, libraries, and parks and recreation facilities (including bikeways) through the use of fee schedules, assessment district financing, Community Facility District financing, or other mechanisms as determined appropriate by each respective city.
2. Recipients of property through public conveyance process, or other conveyance procedures, shall be required to mitigate any impacts of their public uses of property on public services and facilities.

(o). Fire Protection/Emergency Medical Services. Prior to the conveyance of land from the City to a developer, and/or the first final map recordation or building permit issuance for development (except for financing and re-conveyances purposes), the project developer could be required to enter into an agreement with the City of Tustin or City of Irvine/OCFA, as applicable, to address impacts of the project on fire services. Such agreement could include participation for fire protection, personnel and equipment necessary to serve the project and eliminate any negative impacts on fire protection services.

(p). Prior to issuance of building permits, the project developer shall work closely with the OCFA to ensure that adequate fire protection measures are implemented in the project.

(q). Prior to issuance of building permits for phased projects, the project developer shall submit a construction phasing plan to the OCFA demonstrating that emergency vehicle access is adequate.

(r). Prior to the issuance of building permits, the project developer shall submit a fire hydrant location plan for the review and approval of the Fire Chief and ensure that fire hydrants capable of flows in amounts approved by the OCFA are in place and operational to meet fire flow requirements.

5.7.2.10 Fire Protection Service Level of Significance After Mitigation

No significant unavoidable adverse impacts related to fire protection services would occur.

5.7.3 POLICE SERVICES

5.7.3.1 Police Services Regulatory Setting

City of Tustin General Plan

The City's General Plan Public Safety Element contains the following goals and policies related to police services.

Goal 6 **Stabilize demand for law enforcement services.**

Policy 6.1 Provide appropriate levels of police protection within the community.

Policy 6.2 Periodically evaluate service levels and service criteria.

Policy 6.3 Pursue State and Federal monies to offset the cost of providing police protection.

Policy 6.4 Cooperate with the Orange County Sheriff's Department and surrounding police departments to provide back-up police assistance in emergency situations.

Policy 6.5 Promote the use of defensible space concepts (site and building lighting, visual observation of open spaces, secured areas, etc.) in project design to enhance public safety.

Policy 6.6 Enhance public awareness and participation in crime prevention by developing new, and expanding existing, educational programs dealing with personal safety awareness, such as neighborhood watch, commercial association programs, and community-oriented policing.

5.7.3.2 Police Services Environmental Setting

The Tustin Police Department provides police services throughout the City, including to the Project site. Police Department headquarters are located at 300 Centennial Way, Tustin, CA 92780, which is approximately 3.5 roadway miles north of the Project site. Additionally, Tustin Police Department "Annex" is located at 15445 Lansdowne Road, approximately 1.1 roadway mile north of the Project site.

As of May 2024, the Tustin Police Department has 83 full time sworn police officers, 7 part time sworn officers, 44 full time civilian support personnel and 12 part time civilian support personnel. According to the California Department of Finance, the City of Tustin had a population of 78,559 residents in 2023 (California Department of Finance, 2023). Based on this population estimate, the City's sworn officer to population ratio is 1.1 officers per 1,000 population.

Police Department Performance Standards

According to the Table PS-3, *Emergency Service Standards*, of the Tustin General Plan, the Tustin Police Department has a target response time of 3:30 minutes for emergency calls and 13 minutes for non-emergency calls (City of Tustin, 2018).

Tustin Police Department groups calls for service into four priority categories, described below.

- Priority 1: Immediate threat to life or significant threat to public safety. Priority 1 calls are dispatched immediately.
- Priority 2: Crimes in progress or other calls for service with a potential threat to public safety that do not rise to the level of a Priority 1 call. These calls are dispatched as soon as possible.
- Priority 3: Calls for service with a reporting party who is waiting for an officer.
- Priority 4: Report calls with a delay in reporting and limited suspect information.

Average response times for each call type between January 1, 2023, to December 31, 2023, City wide are provided below.

- Priority 1 – 00:05:43
- Priority 2 – 00:14:25
- Priority 3 – 00:42:27
- Priority 4 – 00:53:36

5.7.3.3 Police Services Thresholds of Significance

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered police department facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police services.

5.7.3.4 Police Services Methodology

The potential impacts related to police services were evaluated based on the ability of existing and planned Police Department staffing, equipment, and facilities to meet the additional demand for police services resulting from implementation of the proposed Project. Impacts are considered significant if implementation of the proposed Project would result in inadequate staffing levels, response times, and/or increased demand for services that would require the construction or expansion of new or altered facilities that might have an adverse physical effect on the environment. For police services, a significant impact could occur if the proposed Project generated the need for additional personnel or equipment that could not be accommodated within the existing station and substations and would require the construction of a new station or an expansion of an existing station.

5.7.3.5 Police Services Environmental Impacts

Summary of Previous Environmental Impacts

The certified FEIS/EIR determined that implementation of the Specific Plan would increase the demand for police services in the cities of Tustin and Irvine. The FEIS/EIR identified the need for two additional patrol units and three additional investigative units in the Tustin Police Department, and two additional sworn officers in the Irvine Police Department. However, it found that buildout would not require new or expanded police facilities and impacts would be less than significant. The FEIS/EIR included implementation measures which required coordination between future developers/applicants and the City of Tustin or the City of Irvine, depending on the development site's jurisdiction, in order to provide adequate police protection facilities. The 2006 Addendum found similar impacts with respect to police services and no new impacts were identified.

The 2017 SEIR Initial Study found that, although the 2017 TSLP SPA anticipated increase of 6,371 residents would result in an increase in demand for police protection, this would be offset by the reduction in approximately 1.7 million square feet of nonresidential uses (2017 TLSP Initial Study, p. 83). Service level impacts are anticipated to be similar to that analyzed in the FEIS/EIR. No new police facilities were determined to be needed and no significant physical impacts were identified. Additionally, developers are required to coordinate with the Tustin Police Department prior to project approval to ensure adequate security precautions and design features are in place. No new significant impacts are anticipated.

Modified Project Environmental Impacts

IMPACT PS-2 THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED POLICE SERVICE FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS, IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS AND RESPONSE TIMES OR OTHER PERFORMANCE OBJECTIVES FOR POLICE SERVICES.

This threshold was previously addressed within Section 5.14 the Initial Study prepared for the 2017 TLSP SPA SEIR under threshold (b). Impacts were determined to be less than significant.

Less than Significant Impact with Mitigation. While there is no specific development proposed as part of this Project, approval of the Modified Project would allow up to 4,970 additional residential units for a total buildout capacity of 9,456 residential units within the TLSP. Thus, construction and operation of future residential development as a result of the proposed Project would increase demands for police protection services over the existing site condition. As described in Section 5.6, *Population and Housing*, of this SEIR, the

proposed Project is anticipated to result in 13,817 additional residents. This residential population is expected to create the typical range of police service calls.

Crime and safety issues during Project construction may include theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism. During operation, the proposed Project is anticipated to generate a typical range of police service calls, such as vehicle burglaries, residential thefts, commercial shoplifting, and disturbances. However, future applicants would be required to coordinate with the Tustin Police Department prior to project approval to ensure that adequate security precautions and design features are in place. Consistent with the Approved Project, the proposed Project includes Implementation Measure (m), which requires the City of Tustin to ensure that adequate police protection are provided. Additionally, Implementation Measure (s) is incorporated to require future project developers to coordinate with Tustin Police Department to ensure that adequate security precautions are implemented into future development projects.

Is should be noticed that existing public facilities and services in the TLSP area are funded partially through collection of special taxes associated with Community Facilities Districts (CFDs). Most of the existing CFD within TLSP collect taxes that fund both facilities (Tax A) and services (Tax B). All currently undeveloped properties within the TLSP are part of, or will be annexed into, CFD No. 2018-01 (City Council Resolution No. 18-15). CFD 18-01 collects funds for services (Tax B) as authorized under Government Code Section 53313, including but not limited to police services; fire services; ambulance and paramedic services; recreation programs; maintenance of parks, parkways and open spaces; flood and storm protection; and street and sidewalk maintenance.

Nevertheless, the Police Department's operating budget and expansion of facilities, personnel, and equipment primarily comes from the City's General Fund. Funding from property taxes, as a result of population growth, would be expected to grow roughly proportional to any increase in residential units and businesses in the City. Tustin Police Department would continue to add staff and equipment on an as-needed basis to accommodate the incrementally increasing demands from future development, including the proposed Project. Therefore, the additional demand for police services and protection generated by the proposed Project would be satisfied through the General Fund. Therefore, impacts would be less than significant with the City's General Fund, and Implementation Measures from the Approved Project.

5.7.3.6 Police Services Cumulative Impacts

The geographic area for cumulative analysis of police services is the service territory for Tustin Police Department. The Police Department's operating budget is primarily generated through tax revenues and fees collected from penalties and requested services. Increased property and sales tax from cumulative projects would increase the City's General Fund in rough proportion to population increases, providing funding for any improvements necessary to maintain adequate police protection facilities, equipment, and/or personnel. Consequently, although the cumulative demand for police services would incrementally increase over time, the addition of new officers and equipment to serve the demand is not likely to result in any significant adverse cumulative impacts associated with the construction of new facilities or the alteration of existing facilities. Further, should any new or altered facilities be required in the future, these facilities would be subject to separate CEQA review. Therefore, cumulative impacts associated with police services would be less than significant.

5.7.3.7 Police Services Existing Standard Conditions and Plans, Programs or Policies

There are no applicable regulations related to police services that would reduce potential impacts.

5.7.3.8 Police Services Level of Significance Before Mitigation

Impact PS-2 would be potentially significant.

5.7.3.9 Police Services Mitigation Measures

Adopted FEIR/EIS Implementation Measures Applicable to the Project

(m). General. The City of Tustin and the City of Irvine, each within its respective jurisdiction, shall ensure that adequate fire protection, police protection, libraries, and parks and recreation facilities (including bikeways/trails) needed to adequately serve the reuse plan area shall be provided, as necessary. To eliminate any negative impact the project could have on each community's general fund, financing mechanisms including but not limited to developer fees, assessment district financing, and/or tax increment financing (in the event that a redevelopment project area is created for the site), shall be developed and used as determined appropriate by each City. Specifically:

1. Applicants for private development projects shall be required to enter into an agreement with City of Tustin or the City of Irvine, as applicable, to establish a fair-share mechanism to provide needed fire and police protection services, libraries, and parks and recreation facilities (including bikeways) through the use of fee schedules, assessment district financing, Community Facility District financing, or other mechanisms as determined appropriate by each respective city.
2. Recipients of property through public conveyance process, or other conveyance procedures, shall be required to mitigate any impacts of their public uses of property on public services and facilities.

(s). Police Protection. Prior to issuance of building permits, the project developer shall work closely with the respective Police Department to ensure that adequate security precautions are implemented into the project.

5.7.3.10 Police Services Level of Significance After Mitigation

No significant unavoidable adverse impacts related to police services would occur.

5.7.4 SCHOOL SERVICES

5.7.4.1 School Services Regulatory Setting

California State Assembly Bill 2926: School Facilities Act of 1986

In 1986, AB 2926 was enacted to authorize the levy of statutory fees on new residential and commercial/industrial development in order to pay for school facilities. AB 2926 was expanded and revised in 1987 through the passage of AB 1600, which added Sections 66000 et seq. to the Government Code. Under this statute, payment of statutory fees by developers serves as CEQA mitigation to satisfy the impact of development on school facilities.

California Senate Bill (SB) 50

The passage of SB 50 in 1998 defined the needs analysis process that is codified in Government Code Sections 65995.5 through 65998. Under the provisions of SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. Level I fees are assessed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level II fees require the developer to provide one-half of the costs of accommodating students in new schools, and the State provides the other half. Level III fees require the developer to pay the full cost of

accommodating the students in new schools and are implemented at the time the funds available from Proposition 1A (approved by the voters in 1998) are expended. School districts must demonstrate to the State their long-term facilities needs and costs based on long-term population growth in order to qualify for this source of funding.

City of Tustin General Plan

The City's General Plan Land Use Element contains the following goals and policies related to school services.

Goal 8 **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

Policy 8.1 Encourage within economic capabilities, a wide range of accessible public facilities and community services including fire and police protection, flood control and drainage, educational, cultural and recreational opportunities and other governmental and municipal services. Senate Bill (SB) 50, adopted in 1998, prohibits the City from using the inadequacy of school facilities as a basis for denying or conditioning the development of property. SB 50, however, gave school districts new authority to raise school impact mitigation fees. In addition, the voters passed Proposition 1A in November 1998, which provides $9.2 billion dollars in bonds to construct new or expand existing schools. In summary, school districts have the financial means and legal authority to respond to new development.

Goal 9 **Continue to provide for a planned community in East Tustin compatible with the land use characteristics of the local area and sensitive to the natural environment.**

Policy 9.2 Provide for supporting land uses in East Tustin, including neighborhood commercial centers, park and recreational facilities, and schools, to serve the residential community.

5.7.4.2 School Services Environmental Setting

The TLSP is within the service areas of the Tustin Unified School District (TUSD), Irvine Unified School District (IUSD), and Santa Ana Unified School District (SAUSD), as shown in Figure 5.7-1, *School District Boundaries*. TUSD serves the majority of the TLSP area, including Planning Areas 1, 2, 4-5, 6, 7, 8, 15, 16-19, and a portion of 13-14. IUSD serves development east of Jamboree Road (Planning Areas 20, 21, and 22). SAUSD serves Planning Area 9-12 and a portion of Planning Area 13-14.

Tustin Unified School District

TUSD serves a 24-square mile area and has a total of 30 schools including: 16 elementary schools, two K-8 schools, one K-12 school, four middle schools, one 6-12 school, four high schools and one adult education school.

According to the data from California Department of Education, TUSD has an enrollment of 21,830 students in the 2022/2023 school year (California Department of Education, 2024). Within the TUSD, the Modified Project site is in the attendance areas of the following schools:

- Heritage Elementary School (K-5) is located at 15400 Lansdowne Road within TLSP Neighborhood A.
- W.R. Nelson Elementary School (K-5) is located at 14392 Browning Avenue, approximately 0.6 mile northeast of the TLSP.
- Sycamore Magnet Academy Middle School (6-8) is located at 1402 Sycamore Avenue, approximately 0.4 mile north of the TLSP.
- Legacy Magnet Academy (6-12) is located at 15500 Legacy Road, within TLSP Neighborhood D.
- Tustin High School (9-12) is located at 1171 El Camino Real, approximately 1.2 miles north of the TLSP.

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School District Boundaries

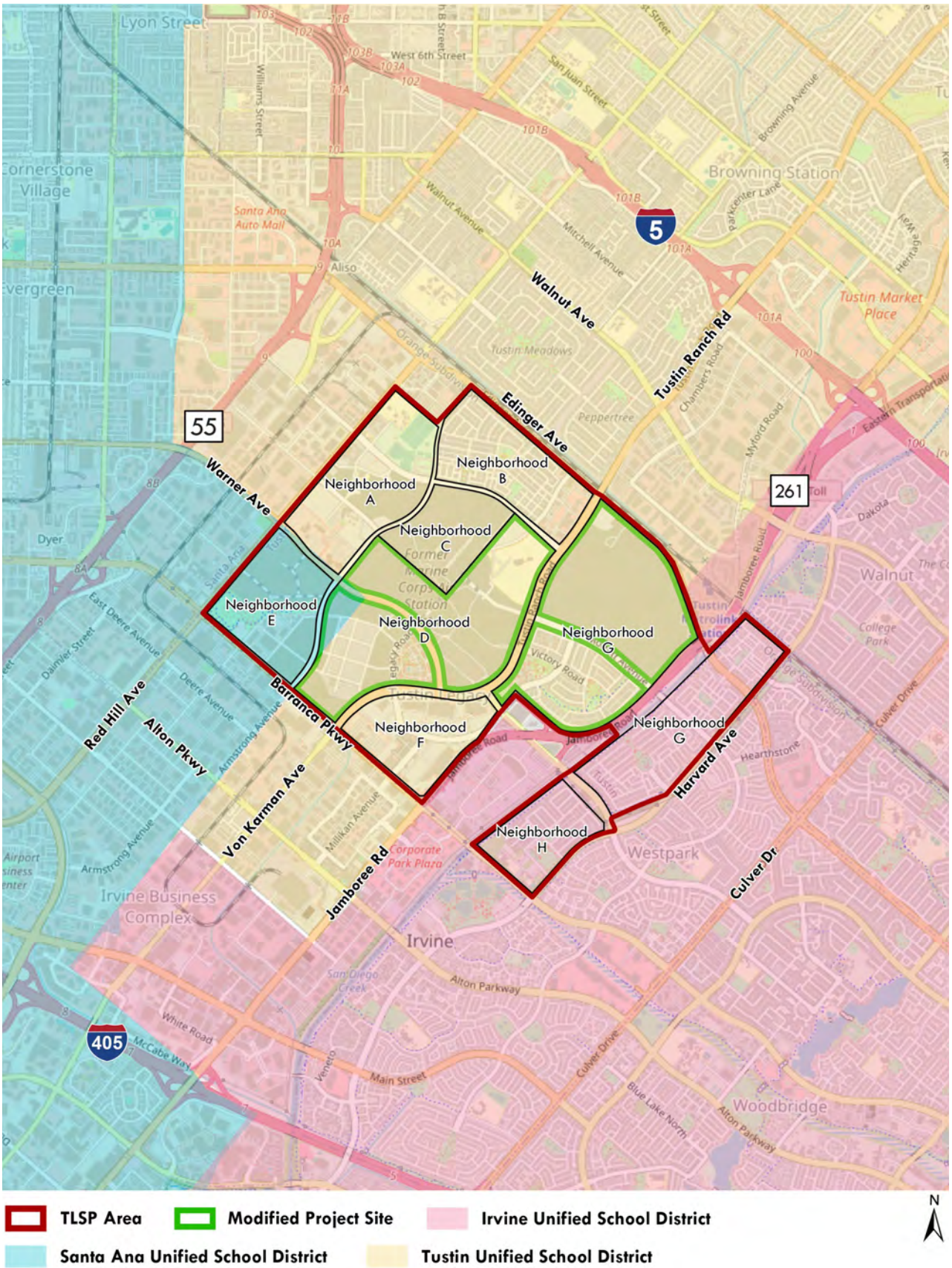

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Table 5.7-3 shows the total capacity, the 2023-2024 school year enrollments, and the remaining capacity of the schools that would serve TUSD students residing in the Modified Project site. As shown, W.R. Nelson Elementary, Sycamore Magnet Academy, and Tustin High School have remaining capacity to serve between 50 and 265 additional students. Heritage Elementary School and Legacy Magnet Academy do not have remaining capacity as of 2023-2024 data.

Table 5.7-3: Existing School Capacity of TUSD Schools Serving the Project Site

School	2023-2024 Enrollment	2023-2024 Capacity	Remaining Capacity
Heritage Elementary School (K-5)	528	500	-28
W.R. Nelson Elementary School (K-5)	464	514	50
Sycamore Magnet Academy (6-8)	1,161	1,314	153
Legacy Magnet Academy (6-12)	904	810	-94
Tustin High School (9-12)	1,818	2,083	265

Source: (Special District Financing and Administration, April 2024)

Irvine Unified School District

IUSD serves a 53-square mile area and more than 38,000 students in one early childhood learning center, 24 elementary schools, five K-8 schools, six middle schools, five high schools, one alternative high school, and two virtual academies (Irvine Unified School District, 2024).

The Modified Project site does not fall within the portion of Neighborhood G that is within the IUSD service area. Additionally, the portion of the TLSP that falls within the IUSD is fully built out and no further development within the boundary is anticipated. Therefore, no additional IUSD students would be generated by the Modified Project.

Santa Ana Unified School District

The SAUSD serves a 24-square mile area and has a total of 57 schools including 26 elementary schools, two K-6 schools, four K-8 schools, eight intermediate schools, seven high schools, four educational options secondary schools, one independent charter, one child development center, three early childhood education programs, and one K-6 deaf and hard of hearing regional program (Santa Ana Unified School District, 2024).

According to the data from the California Department of Education, the SAUSD had an enrollment of 42,247 students in the 2022/2023 school year (California Department of Education, 2024). Within the SAUSD, the Modified Project site is in the attendance areas of the following schools.

- Monroe Elementary School (K-5), located at 417 Ease Central Avenue, Santa Ana, approximately 1.3 miles west of the TLSP.
- McFadden Institute of Technology (6-8), located at 2701 South Raitt Street, Santa Ana, approximately 3 miles west of the TLSP.
- Century High School (9-12), located at 1401 South Grand Avenue, Santa Ana, approximately 1.4 miles northwest of the TLSP.

Table 5.7-4 shows the total capacity, the 2023-2024 school year enrollments, and the remaining capacity of the SAUSD schools that would serve students residing in the Modified Project site. As shown, all three schools have remaining capacity to serve between 264 and 1,180 additional students.

Table 5.7-4: Existing School Capacity of SAUD Schools Serving the Project Site

School	2023-2024 Enrollment	2023-2024 Capacity	Remaining Capacity
Monroe Elementary School	236	500	264
McFadden Institute of Technology	1,061	1,525	464
Century High School	1,385	2,565	1,180

Source: J. Cogan, personal communication, March 20, 2024.

5.7.4.3 School Services Thresholds of Significance

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives for school services.

5.7.4.4 School Services Methodology

The potential impacts related to school services were evaluated based on the ability of existing and planned schools to accommodate the student population that would be generated by the Modified Project. Specifically, impacts on schools are determined by analyzing the estimated increase in student population as a result of Project build out, and comparing the increase to the capacity of schools that would serve the Project site to determine whether new or altered facilities would be required, the construction of which could result in adverse environmental effects.

As described in the TUSD 2024 Fee Justification Report for Residential and Commercial/Industrial Development, school districts anticipate the number of students that would be generated by new residential development to plan for needed facilities. The generation rates used by the TUSD are listed in Table 5.7-5.

Table 5.7-5: Tustin Unified School District Student Generation Rates

Housing Type	Generation Rate
Elementary School (K-5)	
Single Family	0.1842
Multifamily	0.1425
Middle School (6-8)	
Single Family	0.1057
Multifamily	0.0794
High School (9-12)	
Single Family	0.1410
Multifamily	0.1059

Source: (Special District Financing & Administration, April 2024)

Generation rates as described in the SAUSD 2022 Residential Development School Fee Justification Study are listed in Table 5.7-6.

Table 5.7-6: Santa Ana Unified School District Student Generation Rates

Housing Type	Generation Rate
Elementary School (K-5)	
Single Family	0.4028
Multifamily	0.1937
Middle School (6-8)	
Single Family	0.2203
Multifamily	0.1111
High School (9-12)	
Single Family	0.2868
Multifamily	0.1427

Source: (Cooperative Strategies, 2022)

5.7.4.5 School Services Environmental Impacts

Summary of Previous Environmental Impacts

Tustin Unified School District

The 2001 FEIS/EIR determined that the project would generate a total of 2,432 students: 1,473 within the TUSD, 959 within the IUSD and no students within the SAUSD. The Specific Plan provided for two elementary schools and one high school onsite. TUSD determined that those schools would be adequate to house students generated by the project. TUSD would collect school facilities impact fees pursuant to SB 50.

The 2006 Addendum determined that the project would result in a reduction of 497 students within TUSD compared to the student generation presented in the FEIS EIR for the original Specific Plan (estimated to be 1,473 students). No new impacts were identified. The 2006 Addendum also recognized the future development of three school sites in TUSD identified in the 2001 FEIS/EIR and analyzed the impact of expanding the Heritage school by 5-acres to accommodate a combination elementary/middle school.

The 2017 SEIR found that the additional residential units as a result of the 2017 TLSP SPA would generate about 1,250 additional students within TUSD boundaries. The addition of 1,250 students to the schools serving the Project area has the potential to exceed the available capacity for some schools if all development were to occur at the time of project approval. The need for additional services is addressed through compliance with school impact fee assessment. Several school facilities were planned for the TLSP area at the time the 2017 SEIR was being prepared, including an expansion of the existing Heritage School enrollment capacity from 600 students to 900 students; development of a 40.03-acre site to house Legacy Academy, a 6–12 magnet science, technology, engineering and math (STEM) school; development of an alternative education facility, and possible development of additional District administrative facilities. The 2017 SEIR determined that the planned facilities would be able to accommodate anticipated demand. Therefore, the 2017 SEIR determined that the project would have a less than significant impact on school facilities (2017 Draft SEIR, p. 5.6-9).

Irvine Unified School District

The Adopted Specific Plan includes a site for a K–8 school in the IUSD and noted project-generated students in grades 9–12 would attend existing and planned IUSD high schools. The 2001 FEIS/EIR determined that the project would generate 2,432 students: 959 within the IUSD, a net increase of 302 students. It identified a 20-acre school site within the IUSD boundaries to accommodate the increased student population. The

2006 Addendum determined that the project would result in a reduction of 107 students within IUSD. No new significant impacts were identified.

The 2017 SEIR did not analyze impacts related to IUSD because the project did not fall within IUSD's boundaries.

Santa Ana Unified School District

The 2001 FEIS/EIR determined that no new students would be generated directly to the SAUSD resulting from housing development. However, commercial development would indirectly generate new students if new employees were to seek housing nearby within the SAUSD boundaries. These impacts were addressed with a settlement agreement between the City of Tustin and the SAUSD.

The 2006 Addendum recognized a reduction of approximately 0.7 million square feet of nonresidential uses, reducing the potential for indirect student generation. It found that impacts would be reduced compared to the original project.

The 2017 SEIR did not analyze impacts related to the SAUSD because the project did not fall within the SAUSD's boundaries.

Existing Conditions

The TUSD has already completed construction of Heritage Elementary School, a 10-acre site located in Neighborhood A. The first phase of a 40-acre middle school and high school, Legacy Magnet Academy, at the southwest corner of Tustin Ranch Road and Valencia Avenue in Neighborhood D was completed in 2020. This site was a conveyance agreement and grant deed agreement between the City and the TUSD.

Located in Neighborhood H, on the northwest corner of Barranca Parkway and Harvard Avenue, the IUSD has a small campus called the Creekside Education Center. Creekside High School and Irvine Adult School are both located on this approximately 20-acre site.

Modified Project Environmental Impacts

IMPACT PS-3: THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED SCHOOL FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS.

This threshold was previously addressed within the 2017 TLSP SPA SEIR under threshold SS-1. Impacts were determined to be less than significant.

Less than Significant Impact with Mitigation. Buildout of the Modified Project would result in the construction of 6,697 total residential units in the Specific Plan area. Overall, this represents an increase of 2,211 units when compared to the 4,486 units allowed under the Approved Specific Plan.

Assuming the potential for density bonus units, the Modified Project would result in the potential addition of 4,970 residential units within the TUSD boundaries. Using the student generation rates found in Table 5.7-6, the additional residential units have the potential to generate about 1,713 additional students within TUSD boundaries. Table 5.7-7, below, summarizes the number of students that would be generated by different residential unit types.

Table 5.7-7: Tustin Unified School District Students at Project Buildout

Grade Level	Generation Rate	Units	Students
Elementary School (K-5)			
Single Family	0.1842	809	149
Multifamily	0.1425	4,161	593
	Subtotal	*4,970*	*742*
Middle School (6-8)			
Single Family	0.1057	809	86
Multifamily	0.0794	4,161	330
	Subtotal	*4,970*	*416*
High School (9-12)			
Single Family	0.1410	809	114
Multifamily	0.1059	4,161	441
	Subtotal	*4,970*	*555*
		TOTAL	**1,713**

Source: (Special District Financing & Administration, April 2024)

The addition of 1,713 students to the schools serving the Modified Project area has the potential to exceed the available capacity for the schools if all future development were to occur simultaneously. As shown in Table 5.7-7, buildout of the Modified Project could generate 742 elementary school students, 416 middle school students and 555 high school students. Based on the current school capacity information shown in Table 5.7-3, the Modified Project would generate more students than can be accommodated by the available existing capacity. However, buildout of the Modified Project is expected to occur incrementally over a 20-year period.

A service letter was sent to TUSD requesting information regarding the District's ability to serve buildout of the Project. On April 5, 2024, Tom Rizzuti, Director of Facilities and Planning, responded stating that TUSD has no current plans to build new schools in the District. However, a second classroom at Legacy Magnet Academy has been designed and could be constructed if appropriate demand and funding are in place. Additionally, the response stated that the District reserves the right to send students generated by the Project to other schools in the District if space is not available at the current schools of attendance. Thus, although two of the schools serving the Project site are over capacity, the District would be able to send students generated by the Modified Project to other schools within the District that have capacity to accommodate additional students (T. Rizzuti, personal communication, April 5, 2024).

As described above, a portion of Neighborhood D South falls within the service area of SAUSD. The Project would increase the overall unit cap in Neighborhood D South from 1,672 to 1,772 and allow up to 655 density bonus units. Assuming the potential for density bonus units, the Modified Project would result in the potential addition of 755 residential units within the SAUSD boundaries. Using the student generation rates found in Table 5.7-6, the additional residential units have the potential to generate about 393 additional students within SAUSD boundaries. Table 5.7-8, below, summarizes the number of students that would be generated by different residential unit types.

Table 5.7-8: Santa Ana Unified School District Students at Project Buildout

Housing Type	Generation Rate	Units	Students
Elementary School (K-5)			
Single Family	0.4028	117	47

Housing Type	Generation Rate	Units	Students
Multifamily	0.1937	638	124
	Subtotal	*755*	*171*
Middle School (6-8)			
Single Family	0.2203	117	26
Multifamily	0.1111	638	71
	Subtotal	*755*	*97*
High School (9-12)			
Single Family	0.2868	117	34
Multifamily	0.1427	638	91
	Subtotal	*755*	*125*
		TOTAL	**393**

Source: (Cooperative Strategies, 2022)

As shown in Table 5.7-9, the addition of 393 SAUSD students to the schools serving the Modified Project area would be accommodated by the remaining capacity in each of the schools.

Table 5.7-9: Remaining Santa Ana Unified School District Capacity with Buildout of Proposed Project

School	2023/2024 Capacity	2023/2024 Enrollment	Remaining Capacity	Project Generated Students	Remaining Capacity with Project
Tustin Ranch Elementary School (K-5)	236	500	264	171	93
Pioneer Middle School (6-8)	1,061	1,525	464	97	367
Beckman High School (9-12)	1,385	2,565	1,180	125	1,055

Source: (Cooperative Strategies, 2022) (California Department of Education, 2024)

As described within Section 5.7.4.1, *School Services Regulatory Setting*, the need for additional school facilities is addressed through compliance with the school impact fee assessment. SB 50 (Chapter 407 of Statutes of 1998) sets forth a State school facilities construction program that includes restrictions on a local jurisdiction's ability to condition a project on mitigation of a project's impacts on school facilities in excess of fees set forth in the Government Code. These fees are collected by school districts at the time of issuance of building permits for commercial, industrial, and residential projects. The Project incorporates Implementation Measure (f) from the Adopted FEIR/EIS which requires future project developers to provide proof to the City that the appropriate school fees have been paid pursuant to Government Code Section 65995. Alternatively, Implementation Measure (f) allows the project developer to enter into a mutual agreement with an applicable school district to provide alternative mitigation that addresses student generation increases. The existing TUSD development impact fee is $4.08 per square foot for all new residential development, and $0.66 per square foot for new commercial development (City of Tustin, 2018). The existing SAUSD development impact fee is $4.79 per square foot for all new residential development, and $0.78 per square foot for new commercial development. However, these schools fees will increase on June 24, 2024, and July 15, 2024 for TUSD and SAUSD, respectively. The new development impact fee for both districts will be $5.17 for new residential development and $0.84 for commercial development (Santa Ana Unified School District, 2024) (Tustin Unified School District, 2024). Pursuant to Government Code Section 65995, applicants pay developer fees to the appropriate school districts at the time building permits are issued, and payment of the adopted fees provides full and complete mitigation of school impacts. As a result, impacts related to school facilities would be less than significant with implementation of Implementation Measure (f).

5.7.4.6 School Services Cumulative Impacts

The geographic context for cumulative impacts to schools is the TUSD and SAUSD boundaries, respectively. The proposed Project and other development within TUSD and SAUSD could generate additional students resulting in the need to expand or construct new schools. As school district enrollments expand, short-term and long-term plans must be made to accommodate the additional students. However, as described above, the State provided authority for school districts to assess impact fees for both residential and non-residential development projects. Fees collected in accordance with Government Code Section 65995(b) allow TUSD and SAUSD to plan and construct for future growth. Furthermore, the payment of those fees constitutes full mitigation for the impacts generated by new development, per Government Code Section 65995, which would reduce potential impacts related to the projects cumulative school service impacts to a less-than-significant level.

5.7.4.7 School Services Existing Standard Conditions and Plans, Programs or Policies

Government Code Section 65995(b).

5.7.4.8 School Services Level of Significance Before Mitigation

Impact PS-3 would be potentially significant.

5.7.4.9 School Services Mitigation Measures

Adopted 2017 SEIR Implementation Measures Applicable to the Project

(f). Prior to the issuance of building permits, the project developer shall submit to the respective City proof of payment of appropriate school fees adopted by the applicable school district pursuant to Government Code Section 65995. Alternatively, a project developer may enter into a mutual agreement with an applicable school district to provide alternative mitigation that addresses student generation increases.

5.7.4.10 School Services Level of Significance After Mitigation

No significant unavoidable adverse impacts related to school services would occur.

5.7.5 LIBRARY SERVICES

5.7.5.1 Library Services Regulatory Setting

There are no relevant federal, State, or local regulations related to library services.

5.7.5.2 Library Services Environmental Setting

The Orange County Public Library (OCPL) provides library services to the City, including the Project site. OCPL has 33 branch libraries in 24 incorporated cities and unincorporated areas of Orange County and has a system-wide collection of approximately 2.5 million items (Orange County Public Libraries, 2020). The City of Tustin has one branch library operated by OCPL: the Tustin Library, located at 345 East Main Street, approximately 1.6 miles northwest of the Project site. Additionally, the Heritage Park Library, operated by OCPL, is located at 14361 Yale Avenue in Irvine, approximately 1.3 miles northeast of the Project site; and

Heritage Park Regional Branch, operated by OCPL, is located at 14361 Yale Avenue in Irvine, approximately 1.6 miles east of the Project Site.

The Tustin Library branch has amenities such as public computers with internet access, a Memory Lab for library users to digitize their own documents, a local history collection featuring books specific to the Tustin community and surrounding area and OC Read. OC Read is a program designed to support adult learners to further their work, family, and personal goals.

OCPL has a service standard of 0.2 square feet of library facility per capita for the purpose of projecting the need for additional library services (Orange County, 2020).

5.7.5.3 Library Services Thresholds of Significance

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered library facility, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for library services.

5.7.5.4 Library Services Methodology

The potential impacts related to library services were evaluated based on the ability of existing and planned libraries to accommodate the population that would be generated by the proposed Project. Specifically, impacts on libraries are determined by identifying the extent to which the Project would increase demand for services and analyzing the estimated increase in capacity of libraries that would serve the Project site to determine whether new or altered facilities would be required, the construction of which could result in adverse environmental effects.

5.7.5.5 Library Services Environmental Impacts

Summary of Previous Environmental Impacts

The certified FEIS/EIR identified three public libraries within three miles of the TLSP area. It found that implementation of the TLSP would not require construction of a new library facility, and impacts were less than significant. Subsequently, the OCPL entered into an agreement with the City of Tustin to expand the Tustin Branch Library in the Tustin Civic Center. The Project was approved in September 2005 and evaluated in a Mitigated Negative Declaration (SCH 2002041001) adopted in May 2002. In 2009, the new 32,000-square-foot library opened, replacing the 15,000-square-foot facility built in 1974. The new library has a book capacity of 209,000 volumes.

The 2017 SEIR Initial Study determined that the 2017 TLSP SPA would add 4,609 residents (2,212 dwelling units) to the site compared to the Adopted TLSP, resulting in a total of 17,859 residents. Using the OCPL service standard of 0.2 square feet of library space per capita, the FEIS/EIR estimated that the Adopted TLSP would generate a demand for approximately 2,500 square feet of library space. Using the same service standard, the 2017 TLSP SPA would generate demand for a net increase of 922 square feet of library space, or 3,572 square feet total at buildout. The Tustin Library increased its facilities by 14,000 square feet in 2009. Therefore, the additional demand of 922 square feet was accommodated by the existing library facilities and would not require the construction of a new or expanded facility (2017 TLSP Initial Study, p. 84). No new significant impacts were identified.

Modified Project Environmental Impacts

IMPACT PS-4: THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED LIBRARY FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS.

Less than Significant Impact.

This threshold was previously addressed within Section 5.14 of the Initial Study prepared for the 2017 TLSP SPA SEIR under threshold (e). No new significant impact was identified.

As described previously, the Modified Project would permit development of a net increase of 4,466 dwelling units compared to the Approved Project. As described in Chapter 5.6, *Population and Housing*, of this SEIR, buildout of the Project could result in an additional 13,817 residents in the City. This increase in population would increase the demand for library services in the City. Based on the OCPL's service standards of 0.2 square feet of library space per capita, the Modified Project would require approximately 2,764 square feet of additional library space. However, as described in Section 5.7.5.2 above, there are three libraries within two miles of the TLSP which would be available for use by future residents generated under the Modified Project. Additionally, future residents with an OCPL Library Card would be able to check out materials from any of the 32 library branches within OCPL's network (Orange County Public Library, 2024). Therefore, future buildout of the proposed Project would not result in the need for new or physically altered library facilities, the construction of which could cause significant environmental impacts. Therefore, impacts to library services would be less than significant.

Additionally, funding for OCPL services is provided through County property taxes dedicated to the library. These funds are used to upgrade and expand existing facilities, as needed (The Davis Company, 2010). Thus, as future development under the Modified Project occurs, County property taxes would be collected for use by OCPL.

5.7.5.6 Library Services Cumulative Impacts

The geographic scope for cumulative library services is the OCPL service area. Development of the proposed Project and cumulative projects would proportionally contribute to property taxes, a portion of which would be dedicated to OCPL services. Cumulative projects could introduce residents into OCPL's service area and increase demand for library services. However, all projects in the County would contribute towards County property taxes that fund OCPL services throughout the County. These funds would be utilized to upgrade and expand existing and/or planned library facilities and resources, as needed. Further, should any new or altered facilities be required in the future, these facilities would be subject to separate CEQA review. Therefore, impacts from cumulative impacts associated with library services would be less than significant.

5.7.5.7 Library Services Existing Standard Conditions and Plans, Programs or Policies

None.

5.7.5.8 Library Services Level of Significance Before Mitigation

Impact PS-4 would be less than significant.

5.7.5.9 Library Services Mitigation Measures

No mitigation measures are required.

5.7.5.10 Library Services Level of Significance After Mitigation

No significant unavoidable adverse impacts related to library services would occur.

5.7.6 REFERENCES

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5.8 Transportation

5.8.1 INTRODUCTION

This section addresses potential transportation impacts that may result from implementation of the proposed Tustin Legacy Specific Plan (TLSP) Specific Plan Amendment (SPA). The following discussion addresses the existing transportation conditions in the Modified Project area, identifies applicable regulations, evaluates the Modified Project's consistency with applicable goals and policies, identifies impacts of the Approved Project and analyzes new environmental impacts of the Modified Project, and, if necessary, recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Modified Project. This analysis has been prepared in accordance with CEQA requirements to evaluate potential transportation impacts based on vehicle miles traveled (VMT).

Since the analysis was prepared for the original 2001 FEIS/EIR, updated traffic models have been developed, which take into account the current circulation system, funded improvements, and updated local and regional growth projections. In order to provide a valid comparison of the Modified Project's traffic impacts to the Adopted Specific Plan, this traffic analysis shows the traffic impacts of the Adopted Specific Plan and Modified Projects using the Orange County Transportation Analysis Model (OCTAM 5.0), per the *City of Tustin Vehicle Miles Traveled Analysis Guidelines* (City of Tustin, 2024).

Information within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022
- *Tustin Legacy Specific Plan (*formerly the Marine Corps Air Station [MCAS] Tustin Specific Plan), adopted January 2001 and last updated July 2017
- *Tustin Legacy Specific Plan Amendment Final Supplemental Environmental Impact Report (FEIR),* certified July 2017, prepared by PlaceWorks
- Tustin City Code
- *Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), adopted April 2024
- *The Tustin Legacy Specific Plan Amendment Vehicle Miles Traveled (VMT) Analysis*, prepared by EPD Solutions (Appendix D)
- *City of Tustin VMT Analysis Guidlines*, March 2024

Transportation Terminology

- **Major:** A six- to nine-lane divided roadway with no on-street parking, with a typical right-of-way width of 120 to 144 feet and a curb-to-curb pavement width of 102 to 126 feet. Major arterials typically carry a significant volume of regional traffic. When the traffic volumes warrant a major arterial highway in areas where a full 120 to 144 feet of right-of-way is not feasible due to existing structures or topography, a lesser right-of-way (no less than 100 feet) can be used to accommodate a six-lane facility. This is referred to as a "modified major" on the City Arterial Highway Plan.
- **Primary:** A four-lane divided roadway, with a typical right-of-way width of 100 feet and curb-to-curb pavement width of 84 feet. Regional traffic will typically be less than for a major arterial, but primary arterials form an important component of the regional transportation system. When the traffic volumes warrant a primary arterial highway in areas where a full 100 feet of right-of-way is not feasible due to existing structures or topography, a lesser right-of-way (no less than 80 feet) can be used to

accommodate a four-lane facility. This is referred to as a "modified primary" on the City Arterial Highway Plan.

- **Secondary:** A four-lane undivided roadway, with a typical right-of-way width of 80 feet and a curb-to-curb pavement width of 64 feet. These roadways serve as collectors, distributing traffic between local streets, and major and primary arterials.
- **Collector:** A two-lane undivided roadway, with a minimum right-of-way width of 66 feet and a minimum curb-to-curb width of 50 feet. The width may be increased to accommodate roadway features such as bicycle lanes, on-street parking, and turn lanes. At LOS "C," this road type accommodates up to approximately 10,000 vehicle trips per day. This road functions as a collector facility, however it tends to move traffic between two arterials rather than between local streets, it has been added to the City's arterial highway system because it provides network continuity and is regionally significant and may serve through traffic demand where projected volumes do not warrant a higher classification such as Secondary.
- **Divided Collector:** A two-lane, two-way divided roadway, with a minimum right-of-way width of 80 feet and a minimum curb-to-curb width of 56 feet including on-street parking and bike lanes. The width may be decreased when no parking spaces are provided or increased to accommodate roadway features such as turn lanes. At LOS "C," this road type accommodates up to approximately 15,000 vehicle trips per day. Similar to Collectors, this road functions as a collector facility, however it tends to move traffic between two arterials rather than between local streets, it has been added to the City's arterial highway system because it provides network continuity and is regionally significant and may serve through traffic demand where projected volumes do not warrant a higher classification such as Secondary.
- **Class I Bike Path or Bike Trail.** Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians; crossflows with motorized vehicles minimized. Minimum width for Class I (two-way) is 8 feet, with a desired width of 10-12 feet, and minimum shoulder width of 2 feet on each side. Minimum width for Class I (one-way) is 5 feet, with a minimum shoulder width of 2 feet on each side.
- **Class II Bike Lane.** Provides a restricted right-of-way on a roadway's shoulder designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited; vehicle parking and crossflows by pedestrians and motorists permitted. Vehicle parking in a Class II bike lane is not desirable and should be discouraged and/or restricted where possible. Additional lane width (12 feet minimum and 13 feet desirable) shall be required if on-street parking is permitted. The typical width is 8 feet. A reduction in width to allow for restriping of an existing roadway or for added turning lanes may be permitted. In such cases, a 5-foot width, or gutter width plus 3 feet, whichever is greater, is the minimum width.
- **Class III Bikeway.** Provides for shared use of roadway facilities. These bikeways share the street with motor vehicles or share the sidewalk with pedestrians. In both conditions, bicycle use is a secondary function of the pavement.
- **Traffic Analysis Zone (TAZ).** Traffic Analysis Zone (TAZ) refers to the geographic unit used for traffic analysis within transportation planning models, such as the Orange County Transportation Analysis Model (OCTAM) VMT Screening Tool model. A TAZ is a special area delineated by state and/or local transportation officials for tabulating traffic-related data especially journey-to-work and place-of-work statistics. A TAZ usually consists of one or more census blocks, block groups, or census tracts.
- **Transit Priority Area (TPA).** As defined by Senate Bill (SB) 743, a Transit Priority Area (TPA) is an area located within a one-half mile of an existing or planned "major transit stop" or an existing stop along a "high quality transit corridor." Per Public Resources Code, Section 21064.3, "'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Per Public Resources Code,

Section 21155, a high-quality transit corridor means a "corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."

- **Vehicle Miles Traveled (VMT).** VMT is defined as the total miles traveled by vehicles (within a transportation network).
- **Low VMT Area.** The City of Tustin defines low VMT areas as Traffic Analysis Zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city.

5.8.2 REGULATORY SETTING

5.8.2.1 State Regulations

Senate Bill 743 (Steinberg, 2013)

On September 27, 2013, Senate Bill 743 (SB 743) was signed into State law. The California legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas (GHG) emissions, as required by the California Global Warming Solutions Act of 2006 (AB 32).

SB 743 requires the California Governor's Office of Planning and Research to amend the State CEQA Guidelines to provide an alternative to level of service (LOS) as the metric for evaluating transportation impacts under CEQA. Particularly within areas served by transit, SB 743 requires the alternative criteria to promote the reduction of greenhouse gas emissions, development of multimodal transportation networks, and diversity of land uses. The alternative metric for transportation impacts detailed in the State CEQA Guidelines is vehicle miles traveled (VMT). Jurisdictions had until July 1, 2020, to adopt and begin implementing VMT thresholds for traffic analysis.

AB 1358: California Complete Streets Act

The California Complete Streets Act was implemented on January 1, 2011, which required circulation elements to address the transportation system from a multimodal perspective. The bill states that streets, roads, and highways must "meet the needs of all users…in a manner suitable to the rural, suburban, or urban context of the general plan." This bill requires a circulation element to plan for all modes of transportation where appropriate—including walking, biking, car travel, and transit. The Complete Streets Act also requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and people with disabilities. The TLSP implements complete streets planning through the Mobility Plan (Section 2.3 of the TLSP) by providing new and improved pedestrian and bicycle circulation facilities near existing bus routes.

California Fire Code

The California Fire Code sets requirements pertaining to fire safety and life safety, including for emergency access and evacuation (California Code of Regulations Title 24 Part 9). The California Fire Code is incorporated by reference in Article 8 Chapter 8100 of the Tustin City Code.

5.8.2.2 Local and Regional Regulations

SCAG Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the designated metropolitan planning organization for six (6) Southern California counties: Ventura, Los Angeles, San Bernardino, Riverside,

Orange, and Imperial. As the designated metropolitan planning organization, SCAG is mandated by the federal and State governments to prepare plans for regional transportation and air quality conformity. The most recent plan adopted by SCAG is the 2024-2050 Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which was adopted in April 2024. The RTP/SCS integrates transportation planning with economic development and sustainability planning and aims to comply with State GHG emissions reduction goals, such as SB 375. With respect to transportation infrastructure, SCAG anticipates, in the RTP/SCS, that the six-county region will have to accommodate 20,909,000 residents by 2050 while also meeting the GHG emissions reduction targets set by the California Air Resources Board. SCAG is empowered by State law to assess regional housing needs and provide a specific allocation of housing needs for all economic segments of the community for each of the region's counties and cities. In addition, SCAG has taken on the role of planning for regional growth management.

Orange County Transportation Authority

The Orange County Transportation Authority (OCTA) serves as transportation planner and coordinator, designer, builder, and operator for Orange County. OCTA funds improvements to all modes of transportation through several programs, including the Congestion Management Program (CMP). OCTA operates bus transit services throughout Orange County, including Tustin.

The Orange County Congestion Management Program (CMP) was established in 1991 to reduce traffic congestion and to provide a mechanism for coordinating land use and development decisions and was most recently updated in 2023. Compliance with CMP requirements ensure a city's eligibility to compete for the State gas tax funds for local transportation projects. The CMP requires that a traffic impact analysis be conducted for any project generating 2,400 or more daily trips, or 1,600 or more daily trips for projects that directly access the CMP Highway System. Per the CMP guidelines, this number is based on the desire to analyze any impacts that comprise 3 percent or more of the existing CMP highway system facilities' capacity.

City of Tustin General Plan

The City's General Plan includes the following policies related to transportation in the Circulation Element and the Growth Management Element:

Circulation Element

Goal 1 **Provide a system of streets that meets the needs of current and future inhabitants and facilitates the safe and efficient movement of people and goods throughout the City consistent with the City's ability to finance and maintain such a system.**

Policy 1.2 Develop and implement circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians and bicycle lanes or trails that are adjacent or off-road.

Policy 1.3 Coordinate roadway improvements with applicable regional, state and federal transportation plans and proposals.

Policy 1.4 Develop and implement thresholds and performance standards for acceptable levels of service.

Policy 1.10 Require that proposals for major new developments include a future traffic impact analysis which identifies measures to mitigate any identified project impacts.

Policy 1.11 Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.

Policy 1.15 Ensure construction of existing roadways to planned widths, as new developments are constructed.

Policy 1.16 Continue to require dedication of right-of-way and construction of required public improvements on streets adjacent to construction projects at the developer's expense.

Goal 5 **Support development of a public transportation system that provides mobility to all City inhabitants and encourages use of public transportation as an alternative to automobile travel.**

Policy 5.2 Require new development to fund transit facilities, such as bus shelters and turn-outs, where deemed necessary to meet public needs arising in conjunction with development.

Policy 5.5 Promote new development that is designed in a manner which facilitates provision or expansion of transit service and provides non-automobile circulation within the development.

Goal 6 **Increase the use of non-motorized modes of transportation.**

Policy 6.1 Promote the safety of pedestrians and bicyclists by adhering to uniform standards and practices, including designation. of bicycle lanes, off-road bicycle trails, proper signage, and adequate sidewalk, bicycle lane, and off-road bicycle trail widths.

Policy 6.2 Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.

Policy 6.8 Support retrofit installation of sidewalks in industrial districts and Planned Community Business Parks as development occurs.

Policy 6.14 Require new development to dedicate land and fund improvement of bicycle, pedestrian and equestrian facilities, where deemed necessary to meet public needs arising in conjunction with development.

Goal 7 **Provide for well-designed and convenient parking facilities.**

Policy 7.1 Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto arterials.

Policy 7.2 Provide sufficient off-street parking for all land uses.

Growth Management Element

Goal 2 **Ensure adequate transportation facilities are provided for existing and future inhabitants of the City.**

Policy 2.1 Require that all new development pay its share of the street improvement costs associated with the development, including regional traffic mitigation.

Tustin Legacy Specific Plan

Objectives

The 2017 TLSP includes several objectives related to the transportation system of the TLSP area. The following objectives are applicable to the Modified Project area.

Objective 1 Implement a revised land use and urban design plan for the community that weaves the existing development into an updated comprehensive vision for achieving a better balance of residential, commercial, and employment uses, well connected by a variety of transportation modes, parks, and open space.

Objective 2 Reposition the remaining undeveloped lands in Planning Area 15 to be transit oriented in terms of site design, mixing and increased intensity of land uses, walkability, location and design of public spaces, and direct pedestrian access to the adjacent Tustin Metrolink Station.

This large area would also include a range of commercial recreation, cultural, and entertainment uses within and adjacent to the Tustin Legacy Park.

Objective 6 Implement an updated mobility plan for Tustin Legacy that ensures a well-connected system of roadways, pedestrian paths, bicycle routes, and bus and shuttle routes that provide safe and convenient access to uses within Tustin Legacy, the adjacent Metrolink Station, and other offsite destinations.

Objective 7 Maintain the existing nonresidential land use/trip budget total for Tustin Legacy, while allowing for the reallocation of trips between certain neighborhoods, based on the revised mix of land uses for the remaining lands owned by the City of Tustin.

Mobility Plan

Additionally, the 2017 TLSP includes a Mobility Plan (Section 2.3 of the TLSP) that provides for the needs of pedestrians, bicyclists, motorists, and transit users. The mobility plan is intended to: (1) provide efficient accessibility to the regional and local transportation system; (2) to supply adequate internal circulation capacity; and (3) to efficiently service the proposed land uses. The mobility plan addresses all aspects of the public realm within the public right-of-way, including landscaping, sidewalks, bikeways, parking, and travel lanes. Design and development standards for the circulation system are organized by each of the roadway classifications defined in the TLSP.

5.8.3 ENVIRONMENTAL SETTING

5.8.3.1 Existing Site Access

The public roadway network serving the Project site includes the following roadways described below and listed in Table 5.8-1, *Existing Roadway Characteristics within Project Area*,.

Red Hill Avenue – Major Arterial

Red Hill Avenue, bordering the TLSP area to the west, is a regional-serving seven-lane major arterial highway that functions as a high-capacity connection between employment centers, residential areas, and the I-5 freeway. The cities of Tustin and Santa Ana share the right-of-way.

Edinger Avenue – Major Arterial

Edinger Avenue, bordering the TLSP area to the north, is a regional-serving six-lane major arterial highway that extends from Seal Beach in Los Angeles County to Dana Point in south Orange County (with multiple name changes along the way). Within the vicinity of TLSP area, it functions as a high-capacity connection between employment centers, residential, and commercial areas, the SR-55 freeway, and SR-261 Toll Road. It is flanked to the north by Southern Pacific Railroad and Tustin Metrolink Station. This segment is designated as a six-lane Smart Street by the OCTA.

Tustin Ranch Road (Von Karmen Avenue) – Major Arterial

Tustin Ranch Road is a 6-lane major arterial highway that bisects TLSP area, bridges over Edinger Avenue and the Southern Pacific Railroad tracks, and connects to I-5 on the north. It serves employment centers, residential neighborhoods, and commercial areas extending from Newport Beach through Tustin.

Warner Avenue – Major Arterial

The segment of Warner Avenue in the TLSP area completes the continuation of this major six-lane east-west arterial highway. Warner Avenue was designed to go around the southern blimp hangar, which results in an off-set intersection at Tustin Ranch Road. Warner Avenue extends through the heart of the TLSP area, and serves residential, employment, institutional, and commercial/entertainment uses.

Valencia Avenue – Secondary Arterial/ Local Collector

Valencia Avenue is a major entryway into the TLSP area, providing access to neighborhoods, shopping, recreation, and a range of education and other institutional uses. There are four slightly different right-of-way configurations, based on the traffic demands of adjacent uses and the overall urban character along different segments. The segment east of Edinger Connector has been designated as a local collector based on anticipated traffic demands.

Victory Road – Secondary Arterial

Victory Road is a secondary arterial in Planning Area (PA) 1 and PA 15. In PA 1, Victory Road provides secondary access into TLSP area from Red Hill Avenue. It is intended to primarily serve the Advanced Technology and Education Park (ATEP) campus, which flanks Victory Road on both sides. In PA 15, Victory Road is a residential street that connects to Tustin Ranch Road and provides access to the residential projects within the Mixed-Use Transit neighborhood.

Armstrong Avenue – Secondary Arterial

Armstrong Avenue is an important arterial that will serve the employment hub of the TLSP area, as well as provide access to other major public institutional uses within the site.

Moffett Drive – Secondary Arterial/Local Collector

Moffett Drive, east of Jamboree Road, is fully improved. From Tustin Ranch Road to Park Avenue, Moffett Drive is intended to function as a secondary arterial, with four travel lanes. Between Park Avenue and Jamboree Road, Moffett Drive is narrowed to two travel lanes and becomes a modified local collector.

Park Avenue – Secondary Arterial/Modified Local Collector

Park Avenue north of Warner Avenue is planned in several different configurations ranging from a secondary arterial to a modified local collector serving the Mixed-Use Transit neighborhoods. South of Warner Avenue, Park Avenue serves the regional shopping center called The District.

Legacy Road – Secondary Arterial

Legacy Road is an existing four-lane arterial within the Mixed-Use Urban neighborhood that serves residential uses.

Kensington Park Drive – Secondary Arterial

Kensington Park Drive is one of two access roads into TLSP area from Edinger Avenue. The intersection is fully signalized. The road is adjacent to Columbus Square on the west and The Village at Tustin Legacy shopping center on the east.

Table 5.8-1, *Existing Roadway Characteristics within Project Area*, shows the roadway characteristics of the roadways directly serving the Project site. Figure 5.8-1 illustrates the TLSP Vehicular Circulation Plan.

Table 5.8-1: Existing Roadway Characteristics within Project Area

Roadway	Designation	Number of Lanes Fronting Project Site	Sidewalk Complete	Bike Lane
Redhill Avenue	Major Arterial	7-Lane Divided	Yes	Yes
Edinger Avenue	Major Arterial	6-Lane Divided	Yes	Yes
Tustin Ranch Road (Von Karmen Avenue)	Major Arterial	6-Lane Divided	Yes	Yes
Warner Avenue	Major Arterial	6-Lane Divided	Yes	Yes
Valencia Avenue	Secondary Arterial	4-Lane Divided	No (north side is complete)[1]	No
Victory Road	Secondary Arterial	4-Lane Undivided	Yes	Yes
Armstrong Avenue	Secondary Arterial	5-Lane Undivided	No (partial west side) [1]	Yes
Moffett Drive	Secondary Arterial	2-Lane Divided	Yes	Yes
Park Avenue	Secondary Arterial	4-Lane Divided	Yes	Yes
Legacy Road	Secondary Arterial	5-Lane Divided	Yes	Yes
Kensington Park Drive	Secondary Arterial	4-Lane Undivided	Yes	Yes

[1] Planned for future completion according to the City's Circulation Map

5.8.3.2 Existing Transit Service

Public transit bus service for the City is provided by the Orange County Transportation Authority (OCTA). Two Metrolink commuter rail routes serve the Tustin station: (1) the Orange County Line operates between Oceanside in San Diego County and Los Angeles, and (2) the Inland Empire-Orange County Line operates between San Bernardino and Oceanside. A total of 45 trains per day stop at the station (29 Orange County Line and 16 Inland Empire-Orange County Line) (Metrolink 2014). A Metrolink transit plaza is located across from the project area on the corner of Edinger Avenue and Jamboree Road. The proposed Specific Plan Amendment requires Planning Area 15, across from the transit station, to be transit oriented in terms of scale, form, design, and mix of uses. A pedestrian bridge across Edinger Avenue would be the primary pedestrian and bicycle connection between the project area and the transit station. Vehicular access would be provided by additional street access along Edinger Avenue.

5.8.3.3 Existing Bicycle and Pedestrian Facilities

The Recreational Bikeway/Trail Concept Plan provides an opportunity to complete vital links necessary for a comprehensive regional system as well as improved local system. There are three planning agencies involved in the implementation and maintenance of the bikeway/trail system for the Plan and adjacent areas: the City of Tustin, Orange County Public Works, and the City of Irvine. Each of these agencies has developed their own recreational bikeway and trail master plan to efficiently move cyclists within the respective communities served. Ongoing interagency coordination will be required to address the issues associated with bikeway and trail implementation.

The TLSP Recreational Bikeway/Trail Concept Plan links to adjacent on- and off-road bikeways/trails as identified in Figure 5.8-2. These facilities are part of a local and regional network planned by the City of Tustin, County of Orange, and City of Irvine.

Tustin Legacy Specific Plan Amendment SEIR
City of Tustin

Figure 5.8-1

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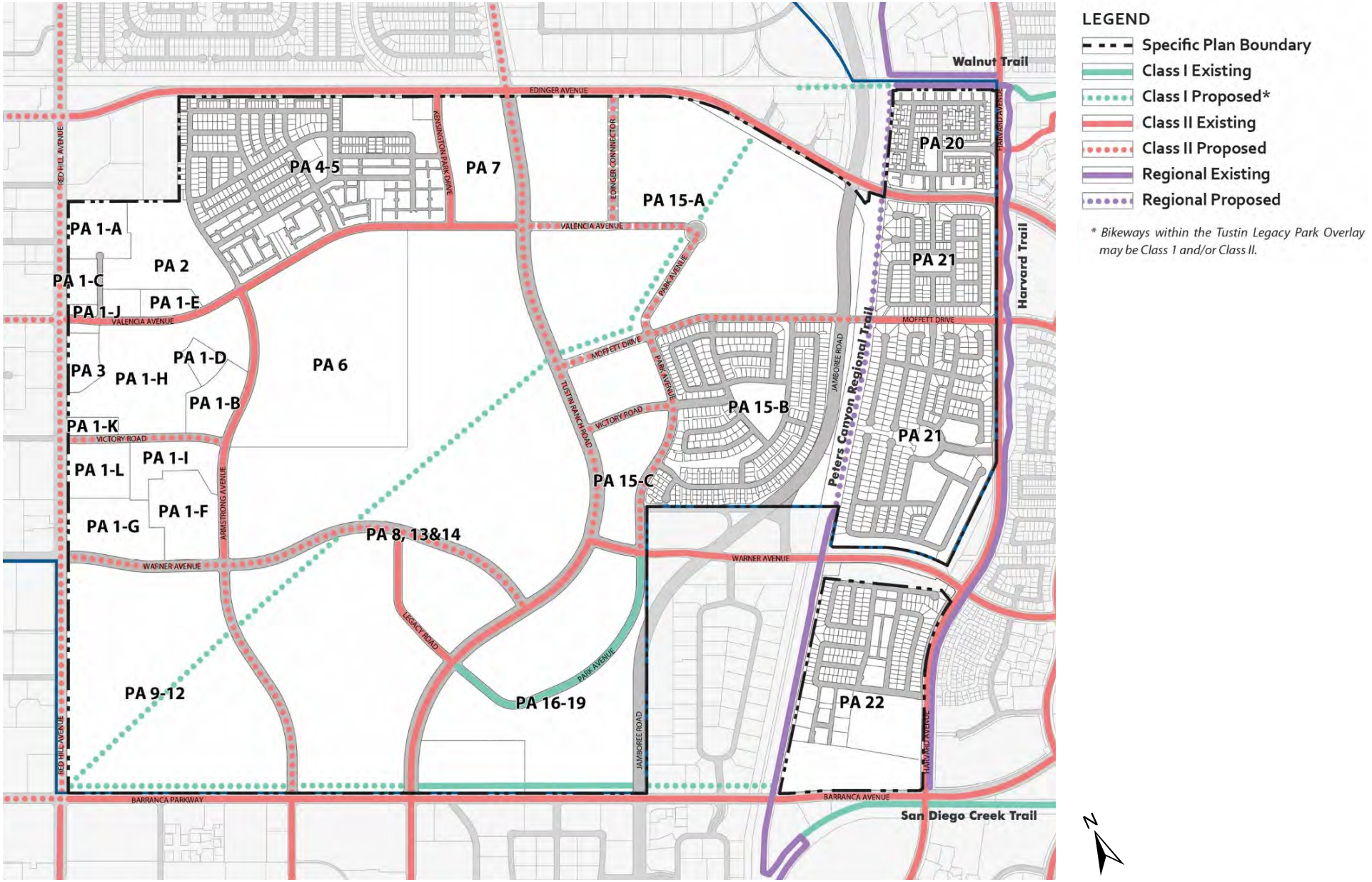
TLSP Bikeways and Trail Plans



Source: Placeworks, 2017. *Tustin Legacy Specific Plan Amendment.*
Note: Several portions of the planned infrastructure depicted have been constructed since publication of the 2017 SEIR.

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5.8.3.4 Existing VMT

As identified in Section 3, *Project Description*, land uses that were modeled for the Approved Project (2017 TLSP) include 4,486 multi-family housing units, 165,600 SF of hotel, 95,200 SF neighborhood commercial, 1,568,090 SF community commercial, 420,000 SF office, 1,000,000 SF continuing care – senior housing, 1,784 high school students (attendance is used for modeling purposes in lieu of school size), and 91 acres of passive park space and 45 acres of active park space.

The 2017 SEIR determined the Approved Project would result in 239,797 daily trips. Using trip generation rates provided by the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition, 2021*, the Approved Project trip generation was calculated to be 100,661 daily trips, with a concentration of trips occurring during the PM peak time.

VMT was not previously analyzed for the Approved Project. However, the 2016 Base Year home-based VMT per capita for the for the three TAZ zones are 8.3 for TAZ 1133, 14.0 for TAZ 1134, and 8.2 for TAZ 1136. The citywide Base Year 2016 home-based VMT is 15.0 VMT per capita (Appendix D). Existing VMT per capita rates across the Modified Project site is generally below the citywide VMT per capita (according to 2016 Base Year).

5.8.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

TRA-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

TRA-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

TRA-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

TRA-4 Result in inadequate emergency access.

The Initial Study (Appendix A) established that the Modified Project would not result in impacts related to Threshold TRA-3; therefore, no further assessment of this threshold is required in this Draft EIR.

5.8.5 METHODOLOGY

To determine whether the potential future buildout of the Project would result in a significant impact related to conflict with a program, plan, ordinance, or policy related to the effectiveness of the circulation system, the extent to which the Modified Project would provide facilities to enhance the use of public transit, pedestrian, and bicycle mobility, the Modified Project was compared to adopted plans for public transit, pedestrian mobility, and bicycle facilities. A significant impact would result if the Modified Project resulted in a conflict that could result in an impact on the environment.

As outlined in CEQA Guidelines Section 15064.3, except as provided for roadway capacity transportation projects, a project's effect on automobile delay shall not constitute a significant environmental impact. Therefore, this analysis has been prepared in accordance with CEQA requirements to evaluate potential transportation impacts based on VMT. The *City of Tustin Vehicle Miles Traveled Analysis Guidelines* provides criteria for projects that would be considered to have a less-than-significant impact on VMT and therefore could be screened out from further analysis. For those projects that are not screened out, mitigation measures would be applied to reduce potential impacts to less than significant. Projects that are not screened out, generate more than 2,400 net daily trips, and require a zone change and/or general plan amendment

would likely need to prepare VMT modeling. Consistent with the City's Guidelines, the VMT screening thresholds were used to identify if the Modified Project could have an impact on VMT, which is detailed below. Trips generated by the Modified Project have been estimated based on trip generation rates provided by the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition, 2021*.

Trip Generation Methodology

The Project trip generation was calculated using trip rates from the ITE *Trip Generation 11th Edition, 2021*. Existing conditions (Baseline) were assessed using ITE trip rates for Land Use Code 310 (Hotel), 822 (Neighborhood Commercial), 820 (Community Commercial), 710 (Office), 251 (Continuing Care - Senior Housing) and 525 (High School). The rates for Project Parks (Legacy Park and Sports Park) were taken from the previously approved TLSP. Based on the density of the proposed housing, trip rates for Land Use Code 210 (Single-family Housing) and 221 Multifamily Housing (Mid-Rise) were used. The ITE rates used for the trip generation can be found in Appendix D.

Vehicle Miles Traveled Analysis Methodology

Consistent with the City's Guidelines, the City's VMT screening thresholds were used to identify if the Project could have an impact on VMT. When a project fails to meet the screening criteria, a more comprehensive VMT analysis may be warranted. The City's guidelines require use of the OCTAM for preparation of VMT analysis. The model includes validated scenarios for 2016 and 2045. These scenarios have been validated using existing traffic counts. Data for years between 2016 and 2045 can be extrapolated using linear interpolation between the 2016 and 2045 model output. The model was run for the base year (2016) and future year (2045) with and without project conditions (i.e., four full model runs). The Project is located within three OCTAM TAZ zones: TAZ 1133 (Neighborhood D North), TAZ 1134 (Neighborhood G West), and TAZ 1136 (Neighborhood D South).

The City of Tustin VMT Guidelines utilizes recommendations provided by the California Office of Planning and Research (OPR) and modeling data provided by OCTA to establish the following VMT thresholds of significance projects. The City's significance threshold for residential projects is based on the project's home-based VMT per capita and the City's significance threshold for non-residential projects is based on the project's employment VMT, per employee. The significance criteria from the City's guidelines are as follows:

Residential Projects. A significant transportation impact occurs if:

1. The project's base year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.
2. The project's future year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

Non-Residential Projects. A significant transportation impact occurs if:

1. The project's base year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per employee for the City of Tustin.
2. The project's future year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per employee for the City of Tustin.

5.8.6 ENVIRONMENTAL IMPACTS

Summary of Impacts Associated with the Approved Project

On January 20, 2016, the Governor's Office of Planning and Research released revisions to its proposed CEQA guidelines for the implementation of SB 743. Final review and rulemaking for the new guidelines were

not yet approved at the time of the 2017 TLSP SPA SEIR preparation and certification. Since approval of the 2017 SEIR, State law requires that "automobile delay, as described solely by level of service of similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment" (Public Resources Code § 21099[b][2]). Since the Governor's Office of Planning and Research had not yet amended the CEQA Guidelines to implement this change at the time of the 2017 SEIR analysis, automobile delay was still considered a significant impact, and the City of Tustin utilized established LOS criteria for determining impacts of the Approved Project.

The Approved Project anticipated a total trip generation of 239,797 daily trips for the entire TLSP area, a 12,322-trip increase from the previously adopted 2013 version of the TLSP. The Initial Study prepared for the 2017 SEIR determined that the Approved Project would result in less-than-significant impacts on hazards due to a design feature, consistent with the original FEIS/EIR. Likewise, the Initial Study determined the Approved Project would not decrease the safety or performance of pedestrian, bicycle, or transit facilities and the Approved Project is consistent with the conclusion of the original FEIS/EIR that impacts would be less than significant.

IMPACT TRA-1: THE PROJECT WOULD NOT CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING THE CIRCULATION SYSTEM, INCLUDING TRANSIT, ROADWAY, BICYCLE, AND PEDESTRIAN FACILITIES.

Less Than Significant Impact.

In general, the following traffic analysis is regarded as a hypothetical scenario and is not reflective of an immediate-term construction project. The analysis is, ultimately, misleading because it assumes that the Modified Project would be fully built out immediately upon adoption of the TLSP SPA. In reality the proposal is a long-range development project that would be constructed incrementally, and full buildout is not realized until a future projected date; thus, this analysis conservatively overestimates impacts by assuming immediate, concurrent buildout. Furthermore, the following analysis does not account for surrounding future development and related changing land uses, and it does not account for the corresponding change in trip distribution patterns associated with changing land uses. For these reasons, the analysis provided here for the proposed Modified Project is included for disclosure, information, and comparison purposes only.

This threshold was addressed under Impact 5.7-1 of the 2017 SEIR (page 5.7-12); however, the discussion was heavily focused on the project's impacts on LOS of roadway segments and intersections. Per SB 743, an updated analysis has been provided below, which moves away from using LOS as a metric for determining whether the Modified Project would result in significant impacts. Further, a Traffic Impact Analysis (TIA) has been prepared separately from this Draft Supplemental Environmental Impact Report (DSEIR) and is available for review upon request through the City.

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Table 5.8-2: Modified Project Trip Generation

Land Use	ITE Trip Rate/Unit[1]			Unit	Neighborhood D South (PA 13 & 14)				Neighborhood D North (PA 8)				Neighborhood G (PA 15)				Total			
No-Project	**Daily**	**AM**	**PM**		**Approved Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Approved Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Approved Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Approved Project**	**Daily Trips**	**AM Trips**	**PM Trips**
Single Family Housing	9.43	0.7	0.94	DU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multi-Family Housing	4.54	0.37	0.39	DU	1,672	7,591	619	652	-	-	-	-	2,814	12,776	1,041	1,097	4,486	20,366	1,660	1,750
Hotel	7.99	0.46	0.59	RM	550	4,395	253	325	-	-	-	-	-	-	-	-	550	4,395	253	325
Neighborhood Commercial	54.45	2.36	6.59	TSF	-	-	-	-	-	-	-	-	95.2	5,184	225	627	95	5,184	225	627
Community Commercial	37.01	0.84	3.4	TSF	20.4	755	17	69	1,547.69	57,280	1,300	5,262	-	-	-	-	1,568	58,035	1,317	5,332
Office	10.84	1.52	1.44	TSF	420	4,553	638	605	-	-	-	-	-	-	-	-	420	4,553	638	605
Continuing Care - Senior Housing	4.31	0.24	0.3	DU	-	-	-	-	-	-	-	-	404	1,741	97	121	404	1,741	97	121
High School	1.94	0.52	0.14	STU	-	-	-	-	1,784	3,461	928	250	-	-	-	-	1,784	3,461	928	250
Park - Legacy Park (Passive)	5	0	0	AC	6	30	-	-	54	270	-	-	31	155	-	-	91	455	-	-
Park - Sports Park (Active)	53.8	0.01	7.5	AC	-	-	-	-	45	2,421	0	338	-	-	-	-	45	2,421	0	338
No-Project Total						**17,323**	**1,527**	**1,651**		**63,432**	**2,228**	**5,849**		**19,855**	**1,363**	**1,846**		**100,611**	**5,118**	**9,346**
Project Land Use Changes	**Daily**	**AM**	**PM**	**Unit**	**Project Addition**	**Daily Trips**	**AM Trips**	**PM Trips**	**Project Addition**	**Daily Trips**	**AM Trips**	**PM Trips**	**Project Addition**	**Daily Trips**	**AM Trips**	**PM Trips**	**Project Addition**	**Daily Trips**	**AM Trips**	**PM Trips**
Single Family Housing	9.43	0.7	0.94	DU	117	1,103	82	110	-	-	-	-	692	6,526	484	650	809	7,629	566	760
Multi-Family Housing	4.54	0.37	0.39	DU	638	2,897	236	249	2,867	13,016	1,061	1,118	656	2,978	243	256	4,161	18,891	1,540	1,623
Hotel	7.99	0.46	0.59	RM	(430)	(3,436)	(198)	(254)	121	967	56	71	-	-	-	-	(309)	(2,469)	(142)	(182)
Neighborhood Commercial	54.45	2.36	6.59	TSF	-	-	-	-	-	-	-	-	(95)	(5,184)	(225)	(627)	(95)	(5,184)	(225)	(627)
Community Commercial	37.01	0.84	3.4	TSF	(10)	(385)	(9)	(35)	(509)	(18,838)	(428)	(1,731)	37	1,351	31	124	(483)	(17,872)	(406)	(1,642)
Office	10.84	1.52	1.44	TSF	23	249	35	33	473	5,127	719	681	705	7,639	1,071	1,015	1,201	13,016	1,825	1,729
Continuing Care - Senior Housing	4.31	0.24	0.3	DU	521	2,246	125	156	-	-	-	-	(134)	(578)	(32)	(40)	387	1,668	93	116
High School	1.94	0.52	0.14	STU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Park - Legacy Park (Passive)	5	0	0	AC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Park - Sports Park (Active)	53.8	0.01	7.5	AC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Project Changes Total						**2,674**	**271**	**259**		**272**	**1,408**	**140**		**12,732**	**1,572**	**1,378**		**15,679**	**3,251**	**1,777**
Total Land Use	**Daily**	**AM**	**PM**	**Unit**	**Modified Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Modified Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Modified Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Modified Project**	**Daily Trips**	**AM Trips**	**PM Trips**
Single Family Housing	9.43	0.7	0.94	DU	117	1,103	82	110	-	-	-	-	692	6,526	484	650	809	7,629	566	760
Multi-Family Housing	4.54	0.37	0.39	DU	2,310	10,487	855	901	2,867	13,016	1,061	1,118	3,470	15,754	1,284	1,353	8,647	39,257	3,199	3,372
Hotel	7.99	0.46	0.59	RM	120	959	55	71	121	967	56	71	-	-	-	-	241	1,926	111	142
Neighborhood Commercial	54.45	2.36	6.59	TSF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Community Commercial	37.01	0.84	3.4	TSF	10	370	8	34	1,039	38,442	872	3,532	36.5	1,351	31	124	1,085	40,163	912	3,690
Office	10.84	1.52	1.44	TSF	443	4,802	673	638	473	5,127	719	681	704.7	7,639	1,071	1,015	1,621	17,568	2,463	2,334
Continuing Care - Senior Housing	4.31	0.24	0.3	DU	521	2,246	125	156	-	-	-	-	270	1,164	65	81	791	3,409	190	237
High School	1.94	0.52	0.14	STU	-	-	-	-	1,784	3,461	928	250	-	-	-	-	1,784	3,461	928	250
Park - Legacy Park (Passive)	5	0	0	AC	6	30	-	-	54	270	-	-	31	155	-	-	91	455	-	-
Park - Sports Park (Active)	53.8	0.01	7.5	AC	-	-	-	-	45	2,421	0	338	-	-	-	-	45	2,421	0	338
Total						**19,997**	**1,799**	**1,910**		**63,704**	**3,636**	**5,989**		**32,588**	**2,935**	**3,224**		**116,289**	**8,370**	**11,123**

[1] Trip rates from the Institute of Transportation Engineers, Trip Generation Manual,11th Edition, 2021.
[2] Units:
DU = Dwelling Units
RM = Rooms
TSF = Thousand Square Feet
STU = Students
AC = Acres

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As stated above, the Modified Project trip generation was calculated using trip rates from the ITE *Trip Generation 11th Edition, 2021*. As shown in Table 5.8-2, the recalculated trip generation for the Approved Project yielded an anticipated 100,611 total daily trips within the Modified Project site (Neighborhood D North, D South, and G). The Modified Project would be anticipated to generate 15,679 new daily trips, including 3,251 trips during the AM peak hour and 1,777 trips during the PM peak hour, within the Modified Project site. Therefore, a total of 116,289 trips would be anticipated as a result of buildout of the Modified Project within the Modified Project area.

Roadway: The 2017 TLSP includes a Mobility Plan, which describes future roadway alignments to be constructed as the TLSP area is continuously built out. At the time of the 2017 TLSP adoption, most major and secondary arterial roadways had been constructed along with several local roadways and connectors serving existing developments. Since 2017, several developments have been constructed and new local roads have been implemented to provide access.

The Modified Project does not propose a specific development project, rather it allows the future development of additional dwelling units compared to the Approved Project. The Modified Project would continue to require vehicular access to the site from the adjacent roadways and no major changes to the Mobility Plan would be required. All future development facilitated by the Modified Project would be required to make necessary driveway and roadway improvements as specified by the TLSP Phasing Plan. Specific roadway improvements required to support residential development within the Project site are not known at this time and will not be known until a development project is proposed. All future projects under the Modified Project would be required to comply with the circulation system standards and to adhere to uniform standards and practices of the City. Compliance with standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians would be ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits.

Consistency with applicable goals and policies of the City of Tustin General Plan and the TLSP can be found in Section 5.4, *Land Use*, within Table 5.4-3, *Consistency with Relevant General Plan Goals and Policies*, and Table 5.4-4, *Project Consistency with Tustin Legacy Specific Plan*. As discussed in Section 5.4, the Modified Project would result in a less-than-significant impact on consistency with existing local goals and policies. Therefore, the Modified Project would not conflict with existing program, plan, or policy addressing the roadway system.

Transit Services: As described previously, the Project vicinity is served by OCTA. The Project site includes four bus stops for Route 59; three stops along Barranca Parkway and one stop along Tustin Ranch Road. Additionally, the Project site includes six bus stops for Route 72; five stops along Warner Avenue and one stop along Tustin Ranch Road. Additionally, the Tustin Metrolink Station is located at the intersection of Edinger Avenue and Jamboree Road. The Metrolink Station has a stop for the Metrolink Inland Empire-Orange County Line. This existing transit service would continue to serve its ridership in the area. Furthermore, specific infrastructure improvements required to support residential development within the Project site are not known at this time and will not be known until a development project is proposed. However, potential future projects would be required, if deemed necessary, to fund transit facilities as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Therefore, the Modified Project would not alter or conflict with existing roadway facilities addressed in the circulation element, and impacts related to roadway facilities would not occur.

Bicycle Facilities: As detailed previously, there are bike lanes currently serving the Project site. Figure 5.8-2, *TLSP Bikeway and Trails Plan*, shows existing and proposed bike lanes and trailways within the TLSP area. In the existing condition within the Modified Project site, Class II Bike Lanes exist along one side of Armstrong Avenue and along both sides of Warner Avenue, Tustin Ranch Road, Valencia Avenue, Moffet Drive, and

Edinger Avenue. Additionally, the Peters Canyon Regional Trail is adjacent to Jamboree Road, at the eastern edge of TLSP Neighborhood G.

The Project site has been developed with institutional, residential, and government uses and planned bike facility improvements within and bordering the site have already been implemented. Implementation of the Project would not alter or conflict with existing or planned bike lanes or bicycle transportation. Any future development that would be constructed under the Project would be reviewed by the City during plan check for consistency with City bicycle facilities (e.g., driveways, cutouts, and safety considerations) per the City General Plan and TLSP. Thus, impacts related to bicycle facilities would not occur.

Pedestrian Facilities: Within the Modified Project site, sidewalks currently exist along one side of Armstrong Avenue, on both sides of Warner Avenue, Tustin Ranch Road, and Valencia Avenue. The Project simply increases the number of dwelling units permitted, and therefore does not propose any construction or demolition of sidewalks. However, potential future development facilitated by the Project may include sidewalk improvements. Specific sidewalk improvements proposed as part of future development within the Project site are not known at this time and will not be known until a development project is proposed. Future projects under the Project would be required to comply with and adhere to uniform standards and practices, including designation of bicycle lanes and adequate sidewalk as ensured and verified by the city during the plan check and permitting process, prior to obtaining building permits. Therefore, the Modified Project would not conflict with pedestrian facilities, but instead would provide additional facilities. Thus, impacts related to pedestrian facilities would not occur.

Policies: Section 5.4, *Land Use*, includes a list of applicable goals and policies related to the Project. Table 5.4-2 through 5.4-4 includes analysis of the Project's consistency with the 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy, City of Tustin General Plan, and the TLSP. As discussed in Section 5.4, the Project would be consistent with all applicable goals and policies. Thus, impacts related to conflict with a program, plan, ordinance, or policy addressing the circulation system of the Project site and surrounding area would not occur.

IMPACT TRA-2: THE PROJECT WOULD NOT CONFLICT OR BE INCONSISTENT WITH CEQA GUIDELINES § 15064.3, SUBDIVISION (B).

Less than Significant.

VMT was not previously analyzed for the Approved Project under the 2017 SEIR.

As described previously, State CEQA Guidelines Section 15064.3(b) focuses on determining the significance of VMT-related transportation impacts. The City of Tustin VMT Guidelines (2024) contain screening thresholds to assess whether a project has the potential to result in an impact, and if mitigation or further VMT analysis would be required. If none of the screening criteria are met, then the project would require mitigation and potentially a VMT analysis to determine the extent the VMT thresholds are exceeded.

The applicability of each criterion to the Project is discussed below.

Screening Criteria 1 – Affordable Housing Screening

As per the City's Guidelines, projects that consist of 100 percent affordable housing will have a less-than-significant impact on VMT. The Project does not consist of 100 percent affordable housing and therefore would not satisfy the requirements of Screening Criteria 1.

Screening Criteria 2 – High Quality Transit Screening

As per the City's Guidelines, projects located within one half mile of qualifying transit may be presumed to have a less-than-significant impact on VMT. Qualifying transit is defined as (1) a major transit stop meaning

a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (Pub. Resources Code, § 21064.3); or (2) a high-quality transit corridor meaning a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours (Pub. Resources Code, § 21155).

According to the City's guidelines, Tustin Metrolink Station qualifies as a high-quality transit stop. Neighborhood G is located within one-half mile of the Tustin Metrolink Station; however, Neighborhood D North is located approximately one mile from Tustin Metrolink Station and Neighborhood D South is located approximately 1.5 miles from Tustin Metrolink Station. Therefore, the Project would not satisfy the requirements of Screening Criteria 2.

Screening Criteria 3 – Project Type Screening

As per the City's Guidelines, projects which propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses would have a less than significant impact on VMT. The types of projects considered local serving include K-12 schools, local parks, day care centers, gas stations, libraries, fire stations, and other local serving civic uses.

This screening criteria is discussed separately for the non-residential and residential portions of the Project below.

Screening Criteria 4 – Low VMT Area Screening

As per the City's Guidelines, projects located in a low VMT generating area would have a less than significant impact on VMT. A low VMT generating area is defined as traffic analysis zones (TAZs) with a total daily VMT/Service Population (employment plus population) that is less than the base level for the city.

This screening criteria is discussed separately for the non-residential and residential portions of the Project below.

Screening Criteria 5 – Generating less than 500 daily vehicle trips

As per the City's Guidelines, projects which generate less than 500 daily vehicle trips would have a less than significant impact on VMT.

This screening criteria is discussed separately for the non-residential and residential portions of the Project below.

Non-Residential VMT Screening

Screening Criteria 3 – Project Type Screening

The non-residential portion of the project proposes locally serving office use with a net square footage of 0 SF, which is less than 50,000 SF. Therefore, it would satisfy the requirements of Screening Criteria 3.

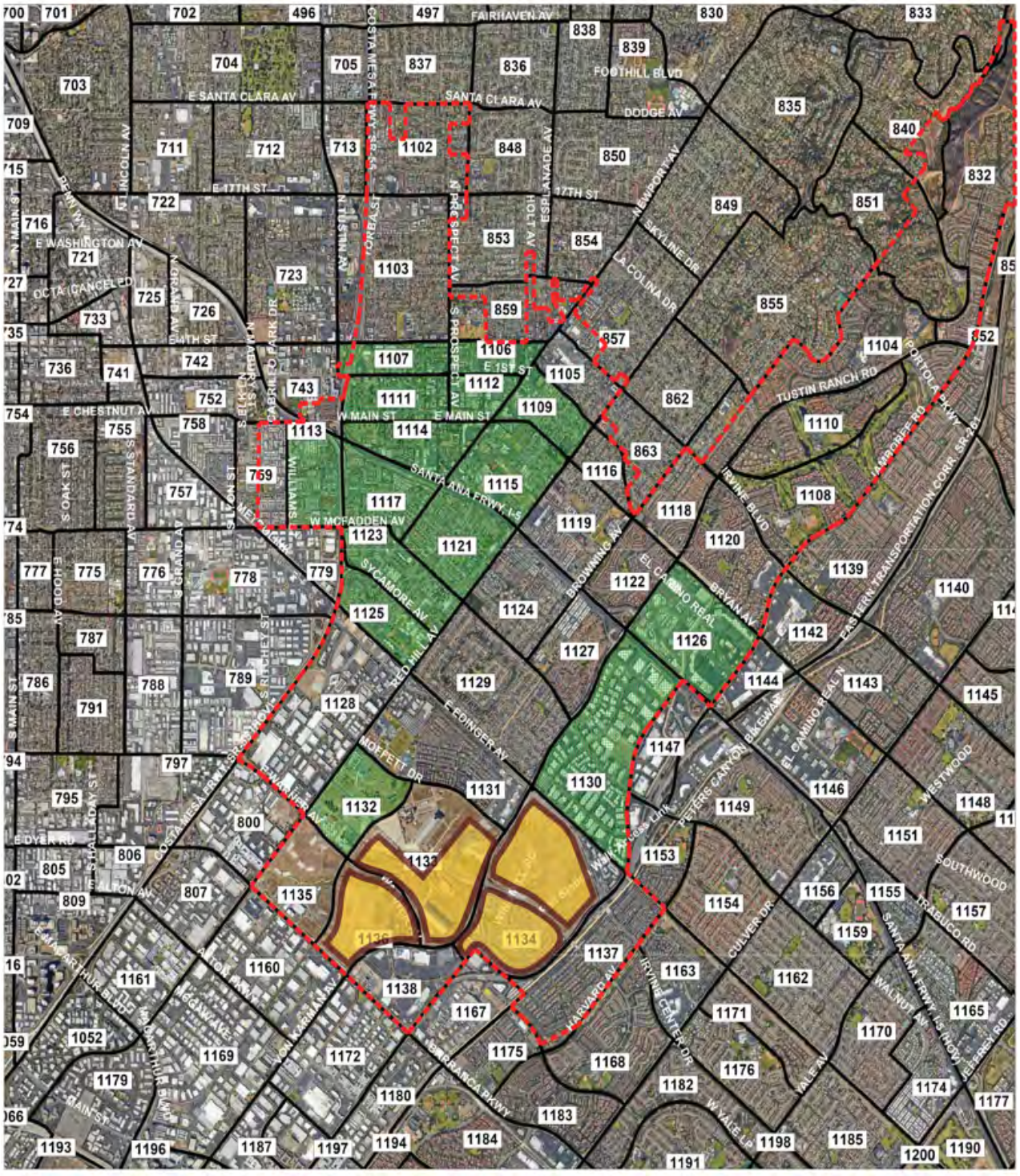
Screening Criteria 4 – Low VMT Area Screening

The Map of Low VMT Generating Area for VMT per employee from the City's Guidelines is shown in Figure 5.8-3, *Low VMT Areas – VMT Per Employee*. As shown in Figure 5.8-3, the non-residential portion of the Project is not located in a low VMT area. Therefore, the non-residential portion of the Project would not satisfy the requirements of Screening Criteria 4.

Screening Criteria 5 - Generating less than 500 daily vehicle trips

As shown in Table 5.8-2, Modified Project Trip Generation, the non-residential portion of the Project is forecasted to generate 10,841 fewer (negative 10,841) daily trips, which is less than 500 daily vehicle trips. Therefore, the non-residential portion of the Project would meet Screening Criteria 5.

Low VMT Areas-VMT Per Employee



Tustin Legacy Specifc Plan Amendment SEIR
City of Tustin

Figure 5.8-3

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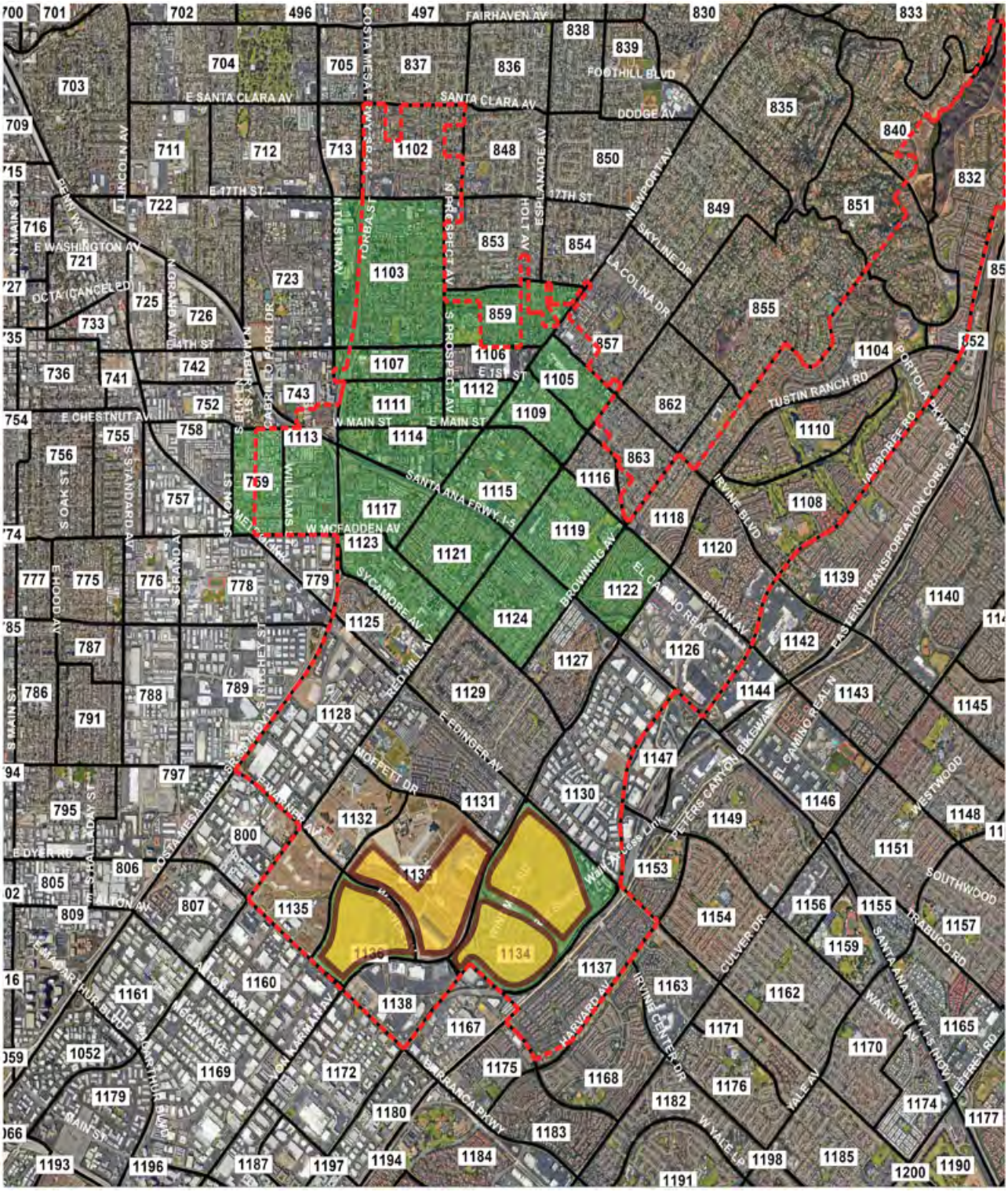
Low VMT Areas-VMT Per Capita



Tustin Legacy Specifc Plan Amendment SEIR
City of Tustin

Figure 5.8-4

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Nonresidential Screening Conclusions

Overall, the non-residential portion of the Project would meet Screening Criteria 3 and 5. Therefore, the non-residential portion of the Project's impact on VMT would be considered less-than-significant and an analysis of VMT would not be required.

Residential VMT Screening

Screening Criteria 3 - Project Type Screening

Screening Criteria 3 would not apply to the residential portion of the Project.

Screening Criteria 4 - Low VMT Area Screening

The Map of Low VMT Generating Area for VMT per capita from the City's Guideline is shown in Figure 5.8-4, *Low VMT Areas – VMT Per Capita*. As shown in Figure 5.8-4, the Project is not located in a low VMT area. Therefore, the residential portion of the Project would not satisfy the requirements of Screening Criteria 4.

Screening Criteria 5 - Generating less than 500 daily vehicle trips

As shown in Table 5.8-2, *Modified Project Trip Generation*, the residential portion of the Project is forecasted to generate 26,520 daily trips, which is more than 500 daily vehicle trips. Therefore, the residential portion of the Project would not meet Screening Criteria 5.

Residential Screening Conclusions

As demonstrated above, the residential portion of the Project does not meet any of the City's screening criteria. Therefore, an analysis of VMT is provided below.

Project Residential VMT Evaluation

As described previously, State CEQA Guidelines Section 15064.3(b) focuses on determining the significance of VMT-related transportation impacts. As stated above, according to the City's Guidance, a project's VMT impacts are considered significant if the project's base year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin. Additionally, if the project's future year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

As shown in Table 5.8-3, *VMT Analysis of Project Impact per City Guidelines*, all three Project TAZs' home-based VMT per capita would be lower than the OCTAM base model year citywide average home-based VMT per capita for the City of Tustin under both base and future year conditions. The Project TAZs' home-based VMT per capita would be 44.4 percent below the City's threshold under base conditions for TAZ 1133, 6.3 percent below the City's threshold under base conditions for TAZ 1134, and 45.2 percent below the City's threshold under base conditions for TAZ 1136. The Project TAZ's home-based VMT per capita would be 27.5 percent below the City's threshold under future conditions for TAZ 1133, 3.7 percent below the City's threshold under future conditions for TAZ 1134, and 40.1 percent below the City's threshold under future conditions for TAZ 1136. Overall, the Project's home-based VMT per capita would be 32.1 percent below the City's threshold under base conditions and 20.3 percent below the City's threshold under future conditions. Therefore, the residential portion of the Project would result in a less than significant VMT impact. Overall, pursuant to the City's VMT analysis guidelines and guidance from OPR and CEQA Guidelines Section 15064.3(b), the entire Project can be assumed to have a less-than-significant VMT impact.

Table 5.8-3: VMT Analysis of Project Impact per City Guidelines

	Base Year 2016	**Future Year 2045**
Project TAZ 1133 Zone Total Home-based VMT	72,732	94,803
TAZ 1133 Total Residents	8,744	8,744
Project TAZ 1133 Home-based VMT per capita	**8.3**	**10.8**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Home-based VMT per Capita	**15.0**	**15.0**
Percent Above/Below Threshold	-44.4%	-27.5%
Impact?	**No**	**No**
	Base Year 2016	**Future Year 2045**
Project TAZ 1134 Zone Total Home-based VMT	73,824	182,731
TAZ 1134 Total Residents	5,267	12,694
Project TAZ 1134 Home-based VMT per capita	**14.0**	**14.4**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Home-based VMT per Capita	**15.0**	**15.0**
Percent Above/Below Threshold	-6.3%	-3.7%
Impact?	**No**	**No**
	Base Year 2016	**Future Year 2045**
Project TAZ 1136 Zone Total Home-based VMT	17,387	66,278
TAZ 1136 Total Residents	2,134	7,402
Project TAZ 1136 Home-based VMT per capita	**8.2**	**9.0**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Home-based VMT per Capita	**15.0**	**15.0**
Percent Above/Below Threshold	-45.2%	-40.1%
Impact?	**No**	**No**
	Base Year 2016	**Future Year 2045**
TLSP Total Home-based VMT	163,943	343,812
TLSP Total Residents	16,145	28,840
TLSP HB VMT per capita	**10.2**	**11.9**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Total Residents	90,762	90,762
City of Tustin Baseline Home-based VMT per Capita	**15.0**	**15.0**
Percent Above/Below Threshold	-32.1%	-20.3%
Impact?	**No**	**No**

IMPACT TRA-4: THE PROJECT WOULD NOT RESULT IN INADEQUATE EMERGENCY ACCESS.

Less than Significant.

This threshold was previously addressed within the Initial Study prepared for the 2017 TLSP SPA SEIR, under threshold (e). Impacts were determined to be less than significant.

Construction

As described above, the Project does not propose a specific development. However, the Project would provide for future proposed development through implementation of the SPA. Future development allowed under the SPA is speculative, but may require construction activities, including equipment and supply staging and storage. However, all future development would be required to ensure emergency access in accordance with Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9), which would be ensured through the City's permitting process. Additionally, all potential road closures would be subject to review and approval by the City, including issuance of an encroachment permit. Once the offsite roadway, utility, pedestrian, and other potential improvements are completed, all road conditions will be restored to normal. Thus, implementation of the Project, including potential future development through the City's permitting process, would ensure existing regulations are adhered to. Therefore, impacts related to inadequate emergency access during construction activities would be less than significant.

Operation

Operation of potential future development would also not result in inadequate emergency access or access to nearby uses. Future applicants would be required to design and construct internal access and provide fire suppression facilities (e.g., hydrants and sprinklers) in conformance with City's *Standard Plans and Design Standards* (PPP T-1). Additionally, the City's Fire Department (OCFA) would review the development plans prior to approval to ensure adequate emergency access pursuant to the requirements in the International Fire Code and Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9). As a result, the Modified Project would not result in inadequate emergency access or access to nearby uses, and no impacts would occur.

5.8.7 CUMULATIVE IMPACTS

Alternative Transportation

The evaluation of Impact TRA-1 concluded that the Modified Project would not result in significant impacts related to alternative transportation or policies addressing the circulation system. Cumulative development in the City and surrounding jurisdictions would be subject to site-specific reviews, including reviews of sidewalk, bike lane, and bus stop designs that would not allow potential cumulatively considerable impacts related to alternative transportation. Therefore, the Project would not cumulatively combine with other projects to result in impacts related to alternative transportation. The Project would be consistent with all applicable plans and policies; and therefore, the Project would not contribute to a cumulatively considerable impact associated with alternative transportation.

Vehicle Miles Traveled

The cumulative traffic study area for the Modified Project includes the City of Tustin and surrounding jurisdictions. The information utilized in this cumulative analysis is based on the potential to combine with impacts from projects in the vicinity of the Modified Project, as discussed in Table 5-1, *Cumulative Projects List*, in Section 5, *Environmental Impacts*, and projections contained within OCTAM.

OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA* states that "a project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact." As discussed under Impact TR-2, the Project would have a less-than-significant VMT impact. Therefore, the Modified Project would not result in a cumulatively considerable impact related to VMT and cumulative traffic impacts would also be less than significant.

Emergency Access

The evaluation of Impact TRA-4 concluded that the Modified Project would not result in inadequate emergency access. Cumulative development in the City and surrounding jurisdictions would be subject to similar site-specific reviews, including reviews of roadway design, design of future infrastructure improvements, and compliance with Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9) which would ensure projects would not result in unsafe traffic conditions or inadequate emergency access. Therefore, the Modified Project would not result in a cumulatively considerable impact related to inadequate emergency access.

5.8.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9)
- City of Tustin General Plan Circulation Element
- Tustin City Code
- Tustin Legacy Specific Plan
- *City of Tustin VMT Analysis Guidlines, March 2024*

Plans, Programs, or Policies

PPP T-1: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.8.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact TRA-1, TRA-2 and TRA-4 would be less than significant.

5.8.10 MITIGATION MEASURES

No mitigation measures are required for the Modified Project.

5.8.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact TRA-1, TRA-2 and TRA-4 would be less than significant.

5.8.12 REFERENCES

City of Tustin. (1997, November). *East Tustin Specific Plan.* Retrieved from https://www.tustinca.org/DocumentCenter/View/704/East-Tustin-Specific-Plan-PDF?bidId=

City of Tustin. (2018, November). *City of Tustin General Plan.* Retrieved from https://www.tustinca.org/DocumentCenter/View/713/City-of-Tustin-General-Plan-PDF

City of Tustin. (2024). *City of Tustin Vehicle Miles Traveled Analysis Guidelines.*

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EPD Solutions. (2024). *The Tustin Market Place Project Vehicle Miles Traveled (VMT) Analysis*.

RK Engineering Group, Inc. (2024). *City of Tustin Vehicle Miles Traveled Analysis Guidelines*.

State of California Office of Planning and Research. (2018, April). *Technical Advisory on Evaluating Transportation Impacts in CEQA* . Retrieved from https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf

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5.9 Tribal Cultural Resources

5.9.1 INTRODUCTION

This section addresses potential impacts to tribal cultural resources (TCRs) from implementation of the proposed Project. Information within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018, updated October 2022)
- *Archaeological Resources Records Search Results for the Tustin Legacy Specific Plan Amendment Project, Tustin, California*, September 6, 2023, prepared by BFSA Environmental Services (Appendix A)

Additionally, part of this analysis is based upon Project-specific coordination and consultation with California Native American tribes that are traditionally and culturally affiliated with the Project region. In accordance with Public Resources Code (PRC) Section 15120(d), certain information and communications that disclose the location of archaeological sites and sacred lands are allowed to be exempt from public disclosure.

5.9.2 REGULATORY SETTING

5.9.2.1 Federal Regulations

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) of 1979 regulates the protection of archaeological resources and sites on federal and Native American lands. The ARPA regulates authorized archaeological investigations on federal lands; increased penalties for looting and vandalism of archaeological resources; and requires that the locations and natures of archaeological resources be kept confidential in most cases. In 1988, amendments to the ARPA included a requirement for public awareness programs regarding archaeological resources.

Native American Graves Protection and Repatriation Act (NAGPRA)

NAGPRA is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

5.9.2.2 State Regulations

California Public Resources Code (PRC)

Archaeological resources are protected pursuant to a wide variety of State policies and regulations enumerated under the California PRC. In addition, cultural resources are recognized as nonrenewable resources and therefore receive protection under the PRC and the California Environmental Quality Act (CEQA).

PRC Sections 5097.9 to 5097.991 provide protection for Native American historical and cultural resources and sacred sites and identify the powers and duties of the Native American Heritage Commission (NAHC). These sections also require notification to descendants of discoveries of Native American human remains and provide for treatment and disposition of human remains and associated grave goods.

California Senate Bill 18

Senate Bill 18 (SB 18) (California Government Code Section 65352.3) sets forth requirements for local governments to consult with California Native American tribes identified by the California NAHC to aid in the protection of TCRs. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early stage of planning to protect, or mitigate impacts on, TCRs. The Tribal Consultation Guidelines: Supplement to General Plan Guidelines (California Office of Planning and Reserach, 2005), identifies the following contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).
- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).

Because the proposed Project includes approval of a Specific Plan Amendment, it is subject to the statutory requirements of SB 18 Tribal Consultation Guidelines.

California Assembly Bill 52

Assembly Bill 52 (AB 52) established a requirement under CEQA to consider "tribal cultural values, as well as scientific and archaeological values when determining impacts and mitigation." Public Resources Code (PRC) Section 21074(a) defines "tribal cultural resources" (TCRs) as "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" that are either "[i]ncluded or determined to be eligible for inclusion in the California Register of Historical Resources" or "in a local register of historical resources." Additionally, defined cultural landscapes, historical resources, and archaeological resources may be considered TCRs. PRC Section 21074(b), (c). The lead agency may also in its discretion treat a resource as a TCR if it is supported with substantial evidence.

Projects for which a notice of preparation for a Draft EIR was filed on or after July 1, 2015, are required to have lead agencies offer California Native American tribes traditionally and culturally affiliated with the project area consultation on CEQA documents prior to submitting an EIR in order to protect TCRs. PRC Section 21080.3.1(b) defines "consultation" as "the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement." Consultation must "be conducted in a way that is mutually respectful of each party's sovereignty [and] recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance." The consultation process is outlined as follows:

1. California Native American tribes traditionally and culturally affiliated with the project area submit written requests to participate in consultations.
2. Lead agencies are required to provide formal notice to the California Native American tribes that requested to participate within 14 days of the lead agency's determination that an application package is complete or decision to undertake a project.

3. California Native American tribes have 30 days from receipt of notification to request consultation on a project.
4. Lead agencies initiate consultations within 30 days of receiving a California Native American tribe's request for consultation on a project.
5. Consultations are complete when the lead agencies and California Native tribes participating have agreed on measures to mitigate or avoid a significant impact on a TCR, or after a reasonable effort in good faith has been made and a party concludes that a mutual agreement cannot be reached (PRC Sections 21082.3(a), (b)(1)-(2); 21080.3.1(b)(1)).

AB 52 requires that the CEQA document disclose significant impacts on TCRs and discuss feasible alternatives or mitigation to avoid or lessen an impact.

California Health and Safety Code Section 7050.5

Health & Safety Code Section 7050.5 requires that if human remains are discovered within a project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he/she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

California Public Resources Code Sections 5097.9 to 5097.991

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites and identify the powers and duties of the NAHC. These sections also require notification to descendants of discoveries of Native American human remains and provide for treatment and disposition of human remains and associated grave goods.

5.9.2.3 Local and Regional Regulations

City of Tustin General Plan

Conservation/Open Space/Recreation Element

Goal 12 **Maintain and enhance the City's unique culturally and historically significant building sites or features.**

Policy 12.1 Identify, designate, and protect facilities of historical significance, where feasible.

Policy 12.2 Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.

Policy 12.3 Development adjacent to a place, structure or object found to be of historic significance should be designed so that the uses permitted and the architectural design will protect the visual setting of the historical site.

Goal 13: **Preserve Tustin's archaeological and paleontologic resources.**

Policy 13.1 Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.

Policy 13.2 Require mitigation measures where development will affect archaeological or paleontological resources.

5.9.3 ENVIRONMENTAL SETTING

Tribal Cultural Resources

A records search from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton was completed and encompassed the Project site and a 500-foot buffer surrounding the Project (BFSA Environmental Services, 2023). The results of the records search identified five archaeological resources that were previously recorded within the Project area. The five resources consist of three prehistoric resources, one historic resource, and one multicomponent resource.

The prehistoric resources include two isolate artifacts that include a stone bowl fragment and a granitic pestle. In addition, one prehistoric limited habitation site was also previously recorded within the Project area. These resources have been previously evaluated as not eligible to the California Register of Historic Resources (CRHR) based on previous studies by Demcak (2006, as cited in BFSA Environmental Services, 2023). The historic resources include former United States Marine Corp World War II era blimp hangars which have been previously evaluated as both CRHR eligible resources and National Register of Historic Places (NRHP) eligible resources and remain extant. The multicomponent site is primarily historic in composition consisting of historic glass bottles of varying types, ceramics, flatware, and one prehistoric mano discovered during cultural resource monitoring for the Tustin Phase I Legacy Project (Kay, 2017, as cited in BFSA Environmental Services, 2023). The multicomponent site was not identified as eligible for listing to the CRHR.

In addition to the five resources identified inside the Project area, four resources were identified within the 500-foot search radius buffer. The resources include a prehistoric food preparation site, two prehistoric isolates, and historic military structures.

Sacred Lands File Search

The City requested a Sacred Lands File (SLF) search from the NAHC and received the results on October 19, 2023. The SLF returned negative results, indicating that no known tribal resources are located in the Project area.

5.9.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.9.5 METHODOLOGY

As described above, the City requested a SLF search from the NAHC and received negative results, indicating that no known tribal resources are located in the Project area. The City also requested from the NAHC a list of Native American tribes who may have knowledge of cultural resources in the Project area.

In compliance with SB 18 and AB 52, on August 28, 2023, and October 26, 2023, the City sent letters to the following Native American tribes that may have knowledge regarding TCRs in the Project vicinity.

- Campo Band of Diegueno Mission Indians
- Ewiiaapaayp Band of Kumeyaay Indians
- Gabrieleno Band of Mission Indians Kizh Nation
- Gabrieleno Tongva San Gabriel Mission Indians
- Gabrieleno Tongva San Gabriel Band of Mission Indians
- Gabrielino Tongva Indians of California Tribal Council
- Gabrielino Tongva Tribe
- Juaneno Mission Indians Acjachemen Belardes
- Juaneno Band of Mission Indians Acjachemen Nation 84A
- La Posta Band of Diegueno Mission Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Diegueno Mission Indians
- Pala Band of Mission Indians
- Santa Rosa Band of Cahuilla Indians
- Soboba Band of Luiseno Indians

The Gabrieleño Band of Mission Indians – Kizh Nation responded on November 14, 2023. Consultation with the Gabrieleño Band of Mission Indians – Kizh Nation occurred via email and the Tribe provided requested mitigation measures.

5.9.6 ENVIRONMENTAL IMPACTS

Prior Environmental Findings

This topic was not previously addressed within the certified FEIR/EIS or subsequent environmental documentation for the TLSP.

IMPACT TCR-1: THE PROJECT WOULD NOT CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A TRIBAL CULTURAL RESOURCE, DEFINED IN PUBLIC RESOURCES CODE § 21074 AS EITHER A SITE, FEATURE, PLACE, CULTURAL LANDSCAPE THAT IS GEOGRAPHICALLY DEFINED IN TERMS OF THE SIZE AND SCOPE OF THE LANDSCAPE, SACRED PLACE, OR OBJECT WITH CULTURAL VALUE TO A CALIFORNIA NATIVE AMERICAN TRIBE, AND THAT IS:

(I) LISTED OR ELIGIBLE FOR LISTING IN THE CALIFORNIA REGISTER OF HISTORICAL RESOURCES, OR IN A LOCAL REGISTER OF HISTORICAL RESOURCES AS DEFINED IN PUBLIC RESOURCES CODE SECTION 5020.1(K), OR

(II) A RESOURCE DETERMINED BY THE LEAD AGENCY, IN ITS DISCRETION AND SUPPORTED BY SUBSTANTIAL EVIDENCE, TO BE SIGNIFICANT PURSUANT TO CRITERIA SET FORTH IN SUBDIVISION (C) OF PUBLIC RESOURCES CODE § 5024.1. IN

APPLYING THE CRITERIA SET FORTH IN SUBDIVISION (C) OF PUBLIC RESOURCE CODE § 5024.1, THE LEAD AGENCY SHALL CONSIDER THE SIGNIFICANCE OF THE RESOURCE TO A CALIFORNIA NATIVE AMERICAN TRIBE.

Less than Significant with Mitigation Incorporated.

Potential future Project construction could include demolition, site preparation, grading, building construction, architectural coating, and paving activities. Project buildout would include the development of up to 4,970 additional residential units within the Modified Project site. Project construction would include excavation at depths that could reach native, undisturbed soils that may contain unknown tribal cultural resources. Project excavation and construction could result in impacts to inadvertent tribal cultural resource finds that could cause substantial adverse change to the significance of such resources.

Based on literature review (i.e., records check and archival research), no prehistoric resource sites or isolates—including a historic TCR—as defined by PRC Section 5020.1(k) have been identified within the Project site.

As described above, a SLF search and a list of Native American tribes who may have knowledge of cultural resources in the Project area was requested from the NAHC. The NAHC responded with a list of Native American tribes and that the SLF search yielded negative results for known TCRs or sacred lands within the Project area. To identify if any TCRs are potentially located within the Project site, the City sent notices to the Native American tribes provided by the NAHC on August 28, 2023, and October 26, 2023, regarding the Project.

One response was received from the Gabrieleño Band of Mission Indians – Kizh Nation on November 14, 2023. The tribe requested to consult over email and provided mitigation measures to be incorporated into the Project. As a result, Mitigation Measure TCR-1 is included which requires retainment of a Native American monitor, with first preference given to the consulting tribe, prior to the commencement of ground-disturbing activities. In addition, Mitigation Measure TCR-2 is incorporated and provides procedures to follow in case of an inadvertent TCR discovery. Finally, Mitigation Measure TCR-3 is incorporated which complies with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98.

No construction is proposed as part of this Project. However, future development associated with the Project would be required to adhere to Mitigation Measures TCR-1, TCR-2, and TCR-3. Implementation of Mitigation Measures TCR-1, TCR-2, and TCR-3 would ensure that potential impacts as a result of the inadvertent discovery of TCRs during future development would be less than significant.

5.9.7 CUMULATIVE IMPACTS

The cumulative study area for TCRs includes the City of Tustin, which contains the same general tribal historic setting. Other projects throughout the City that would involve ground disturbances could reveal buried TCRs.

Cumulative impacts to TCRs would be reduced by compliance with applicable regulations and consultations required by SB 18 and AB 52. As described above, the Project site and vicinity is not known to contain TCRs; however, Mitigation Measures TCR-1, TCR-2, and TCR-3 would be implemented to ensure that impacts would not occur in the case of an inadvertent discovery of a potential TCR. These mitigation measures would ensure that the proposed Project would not contribute to a cumulative loss of TCRs. Therefore, cumulative impacts would be less than significant.

5.9.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- California Government Code Sections 5097.9-5097.99
- California Health and Safety Code Section 7050.5
- California Public Resources Code Sections 21073 et seq. (AB 52)

Plans, Programs, or Policies

The following Plans, Programs, or Policies (PPP) related to TCRs are incorporated into the Project and would reduce impacts related to TCRs. These actions will be included in the Project's Mitigation Monitoring and Reporting Program (MMRP):

PPP TCR-1: Native American historical and cultural resources and sacred sites are protected under PRC Sections 5097.9 to 5097.991, which require that descendants be notified when Native American human remains are discovered and provide for treatment and disposition of human remains and associated grave goods.

PPP CUL-1: Human Remains. Should human remains or funerary objects be discovered during Project construction, the Project would be required to comply with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body (within a 100-foot buffer of the find) until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine the identity of and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD must complete the inspection within 48 hours of notification by the NAHC.

5.9.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Without mitigation, Impact TCR-1 would be **potentially significant**.

5.9.10 MITIGATION MEASURES

TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

a. Prior to the issuance of demolition or grading permits for any projects that would disturb previously undisturbed soils (native soils) or soils that have native fill, the project applicant/developer shall retain a Native American Monitor, with first preference given to the Gabrieleño Band of Mission Indians – Kizh Nation, who responded to the City's request for consultation on November 14, 2023 (first preference Tribe, Tribe). The applicant/developer shall allow 45 days from the initial contact with the first preference tribe to enter into a contract for monitoring services. If the applicant/developer is unable to contact the Kizh Nation after three documented attempts or is unable to secure an agreement, the applicant shall report to the lead agency, and the lead agency will contact the Kizh Nation to validate that the parties were unable to enter into an agreement. The applicant/developer shall have made

three documented attempts to directly contact the Kizh Nation to enter into a tribal monitoring agreement. If the applicant/developer can demonstrate they were unable to secure an agreement with the first preference tribe, as validated and documented by the Community Development Department in writing, or if the contracted tribe fails to fulfill its obligation under the contract terms, then the applicant/developer may retain an alternative qualified tribal monitor from a culturally affiliated tribe if approved by the City.

The monitor shall be retained prior to the issuance of a demolition permit or grading permit, and the commencement of any development related "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, auguring, grubbing, boring, grading, excavation, drilling, and trenching for the purposes of reconstruction and new development. "Ground-disturbing activity" shall not include minor maintenance activities such as potholing, tree removal, and parking lot maintenance. This mitigation measure does not apply to projects that would only disturb soils made up of artificial fill, as verified by a soils or geotechnical report.

b. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.
c. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Kizh Nation. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the consulting tribe. If a monitor is selected from a tribe other than the Kizh Nation, the Kizh Nation shall be contacted if any discoveries are found.
d. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the consulting tribe from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities and that have the potential to impact local TCRs on the project site or in connection with the project are complete.

TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)

Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the tribal monitor and consulting archaeologist. If the consulting tribe is other than the Gabrieleño Band of Mission Indians – Kizh Nation, the Kizh Nation shall be contacted and the consulting tribe will recover and retain all discovered TCRs in the form and/or manner the Kizh Nation deems appropriate, in the Kizh Nation sole discretion, and for any purpose the Kizh Nation deems appropriate, including for educational, cultural and/or historic purposes.

TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects

a. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.
b. If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed.

c. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).
d. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods.
e. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

5.9.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Mitigation Measures identified above, along with existing regulatory programs, would reduce potential impacts associated with TCRs for Impact TCR-1 to a level that is less than significant. Therefore, no significant and unavoidable adverse impacts related to TCRs would occur.

5.9.12 REFERENCES

BFSA Environmental Services. (2023). *Archaeological Resources Records Search Results for the Tustin Legacy Specific Plan Amendment Project, Tustin, California.*

City of Tustin. (2018). *City of Tustin General Plan.*

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5.10 Utilities and Service Systems

5.10.1 INTRODUCTION

This section evaluates the potential effects on utilities and service systems from implementation of the proposed Project by identifying anticipated demand and existing and planned utility availability. This includes water supply and infrastructure, wastewater, drainage, and solid waste. Electric power, natural gas, telecommunications, and renewable energy resources are described in Section 5.3, *Energy*.

Water supply and infrastructure capacity information in this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022
- *Tustin Legacy Specific Plan (*formerly the Marine Corps Air Station [MCAS] Tustin Specific Plan), adopted January 2001 and last updated July 2017
- *Tustin Legacy Specific Plan Amendment Final Supplemental Environmental Impact Report (FEIR),* certified July 2017, prepared by PlaceWorks.
- Tustin City Code
- *Irvine Ranch Water District 2020 Urban Water Management Plan*
- *Tustin Legacy Water Supply Assessment, Irvine Ranch Water District*, February 2024 (Appendix E)
- Data provided by each service provider via personal communications (available upon request with the City of Tustin Planning Department)

Because CEQA focuses on physical environmental effects, this section analyzes whether increases in demand for water, wastewater, stormwater drainage, and solid waste utilities that would result from the proposed Project would result in significant adverse physical environmental effects. For example, physical changes in the environment resulting from the construction of new facilities or an expansion of existing wastewater facilities could constitute a significant impact under CEQA.

Several documents have been prepared over the years to support the planning of future infrastructure supply and demand of the TLSP area. The documents applicable to the Modified Project and referenced throughout the analysis of this section are described below.

5.10.1.1 Tustin Legacy Specific Plan Infrastructure Plan

The Tustin Legacy Specific Plan (TLSP) Infrastructure Plan, included as Section 2.6 of the TLSP, provides the framework for future infrastructure improvements anticipated for the TLSP area. The infrastructure plans were developed in partnership with individual service providers based on the approved Land Use Plan. The Infrastructure Plan covers potable water, reclaimed water, sanitary sewer, and storm drainage. Individual infrastructures are further discussed in the respective sections below.

5.10.1.2 Tustin Legacy Sub Area Master Plan

In 2008, an updated Sub-Area Master Plan (SAMP) — the MCAS Tustin/Legacy Park Revised Sub-Area Master Plan completed by RBF Consulting and finalized by Irvine Ranch Water District (IRWD) in April 2008 (2008 SAMP) — was prepared to provide a comprehensive potable water, wastewater collection and non-potable water distribution, and sewer infrastructure analysis in support of the infrastructure needed to serve the TLSP area. The 2008 SAMP was prepared as an update to the Marine Corps Air Facility Tustin Redevelopment Sub-Area Master Plan, which was adopted by Irvine Ranch Water District in 1999. The

SAMP was updated once again by Michael Baker International on March 16, 2017. The updated SAMP includes updates to the potable water, wastewater collection,d non-potable water distribution, and sewer infrastructure analysis to reflect land uses and buildout assumptions included within the Approved Project (2017 TLSP).

5.10.1.3 Tustin Legacy Specific Plan Phasing Plan

The Phasing Plan, included in Section 4.4 of the TLSP, was included to facilitate development of the TLSP area while assuring provision of infrastructure necessary to support planned development. The plan incorporates performance standards that trigger various utility and public service improvements as future development continues to be considered for the TLSP area. Since the adoption of the Specific Plan, the Phasing Plan has been revised as part of the adopted FEIS/EIR MMRP to incorporate additional facilities and requirements. Table 5.10-1 identifies the type of facilities, scope of improvements, and general triggering mechanism for those facility improvements.

The Phasing Plan is applicable to the Modified Project site and land developers would be responsible for the implementation of the plan accordingly.

Table 5.10-1: Phasing Plan

Facility	General Scope	General Triggering Mechanism
Circulation	1) On-site arterial highways and intersections; 2) Off-site arterial highway and intersection improvements; 3) Selected advanced transportation management system (ATMS) facilities.	When cumulative development and associated average daily trips reach ADT development thresholds based on the land use/trip budget presented in the FEIS/EIR or as modified by the FEIS/EIR Addendum or any subsequent amendment.
Bikeways/Trails	1) Class 1 Bikeway along Peters Canyon Channel; 2) On-site Class II Bikeway System.	1) When Peters Canyon Channel is improved. 2) When arterial highways are constructed.
Domestic (Potable) Water	1) Existing housing water distribution lines; 2) New water mains; 3) Abandoned/relocated wells.	1) Upon determination by IRWD regarding acceptability of the lines. 2) When arterial highways are constructed; 3) Upon determination by the City and consultation with IRWD.
Reclaimed (Non-Potable) Water	1) New water lines; 2) Existing and new well sites.	1) When arterials highways are constructed; 2) Upon completion of negotiations by City IRWD or developer(s) regarding exchange of well sites.
Sanitary Sewer	1) Existing housing sewer conveyance lines; 2) New sewer mains.	1) Upon determination by the IRWD regarding acceptability of the lines; 2) When arterial highways are constructed.
Storm Drain	1) Storm drain systems; 2) Regional flood control channel improvements; 3) Retention basins; 4) Flood plain mitigation.	1) Generally in conjunction with arterial highway construction. Armstrong/Barranca channel improvements upon determination of acceptability as part of development plans. 2) Any project generated Barranca Channel improvements in conjunction with development as needed or determined by the applicable jurisdiction and in consultation with the OCFCD; any necessary project generated Peters Canyon Channel and Santa Ana/Santa Fe channel improvements in conjunction with development as needed or determined by the

Facility	General Scope	General Triggering Mechanism
		applicable jurisdiction and in consultation with the OCFCD. 3) As necessary as interim or permanent design in review of development plans. 4) Filing of flood zone map with FEMA prior to any construction.
Electricity	Electric distribution lines.	When arterial highways are constructed.
Natural Gas	Gas distribution lines.	When arterial highways are constructed.
Telephone	Telephone lines.	When arterial highways are constructed.
Cable Television	Cable television distribution lines; fiber optic cables.	When arterial highways are constructed.
Parks	1) Regional park; 2) Community park (31.5 acre); 3) Community park (46 acres), neighborhood parks and private parks; 4) Neighborhood park in Irvine.	1) Site can be used upon transfer to *end user*; improvements will occur per agreement with City of Tustin; 2) Site can be used upon transfer to City; upgrading will occur upon receipt of adequate funding including park development fees; 3) When adequate park development fees are received, subject to development conditions, development agreements and funding availability as applicable; 4) When adequate funding has been secured from assessment district funding; tax-increment or developer-negotiation.

Source: 2017 Tustin Legacy Specific Plan

5.10.2 WATER

5.10.2.1 Water Regulatory Setting

Safe Drinking Water Act

The United States Environmental Protection Agency (U.S. EPA) administers the Safe Drinking Water Act, which is the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The State Water Resources Control Board, Division of Drinking Water (DDW) implements the requirements of the Act and oversees public water system quality statewide. USEPA establishes legal drinking water standards for contaminants that could threaten public health.

California Urban Water Management Planning Act

Section 10610 of the California Water Code established the California Urban Water Management Planning Act (CUWMPA). CUWMPA requires urban water suppliers to initiate planning strategies to ensure an appropriate level of reliability in its water service. CUWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that annually provides more than 3,000 acre-feet of water service, should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The CUWMPA describes the contents of Urban Water Management Plan's (UWMP) as well as methods for urban water suppliers to adopt and implement the plans. As described below, IRWD is the water purveyor for the TLSP area and has an updated 2020 UWMP that addresses water supply and demand through 2045.

Senate Bill 610

Senate Bill (SB) 610 requires public urban water suppliers with 3,000 or more service connections to identify existing and planned sources of water for planned developments of a certain size. It further requires the public water system to prepare a specified water supply assessment (WSA) for projects that meet the following criteria:

a) A proposed residential development of more than 500 dwelling units;
b) A proposed shopping center employing more than 1,000 persons or having more than 500,000 SF of floor space;
c) A commercial office building employing more than 1,000 persons or having more than 250,000 SF of floor space;
d) A hotel or motel, or both, with more than 500 rooms;
e) An industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 SF of floor area; and
f) A mixed-use project that includes one or more of the projects above.

The components of a WSA include a summary of existing water demand, future water demand by the project, and confirmation that water is available for the project during normal years, a single dry year, and multiple dry years during a 20-year future projection period. The WSA must also describe whether the project's water demand is accounted for in the water supplier's UWMP (IRWD 2020 UWMP).

Senate Bill 221

SB 221 requires the local water provider to provide "written verification" of "sufficient water supplies" to serve the project. SB 221 applies only to residential projects of 500 units or more (infill or low-income or very-low-income housing subdivisions are exempt) and requires the land use planning agency to include as a condition of approval of a tentative map, parcel map, or development agreement a requirement that "sufficient water supply" be available. Sufficiency under SB 221 differs from SB 610 in that it is determined by considering the availability of water over the past 20 years; the applicability of any urban water shortage contingency analysis prepared per Water Code Section 10632; the reduction in water supply allocated to a specific use by an adopted ordinance; and the amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer. In most cases, the WSA prepared under SB 610 meets the requirement for proof of water supply under SB 221.

Senate Bill 1262

SB 1262, which amends Section 66473.7 of the Government Code and Section 10910 of the Water Code requires WSAs to include additional information regarding sustainable groundwater management if water supply for a project includes groundwater, including:

- Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924.
- If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan.

As described below, the city obtains a portion of its water supply from the Orange County Groundwater Basin (OC Basin). Thus, this additional information is provided in the Project-specific WSA (Appendix E).

CALGreen Building Code

California Code of Regulations Title 24, Part 11, establishes the California Green Building Code or CALGreen. The CALGreen Code is updated every three years and sets forth water efficiency standards (i.e., maximum flow rates) for all new plumbing and irrigation fittings and fixtures. Article 8, Chapter 1, Section 8100 of the Tustin City Code (TCC) adopts the California Green Building Standards Code by reference.

Sustainable Groundwater Management Act of 2014

The 2014 Sustainable Groundwater Management Act (SGMA) requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. The Department of Water Resources (DWR) categorizes the priority of groundwater basins. For critically over-drafted basins, sustainability should be reached by 2040. For the remaining high and medium priority basins, 2042 is the deadline. The SGMA also requires local public agencies and Groundwater Sustainability Agency in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans (GSP) or Alternatives to GSPs. GSPs are detailed road maps for how groundwater basins will reach long term sustainability. If a basin is adjudicated, then a GSA does not need to be formed, nor does a GSP need to be prepared.

The Project overlies the Orange County Groundwater Basin (OC Basin). Pursuant to the SGMA, the DWR has designated the OC Basin, (also known as Basin 8-1), as a medium priority basin for purposes of groundwater management. The SGMA specifically calls for Orange County Water District (OCWD), which regulates the OC Basin, to serve as the GSA. The SGMA allows Special Act Districts created by statute, such as OCWD, to prepare and submit an alternative to a GSP that is "functionally equivalent" to a GSP. Basin 8-1 includes the OCWD service area and several fringe areas outside of OCWD that are within the Basin 8-1 boundary. Per the requirements of SGMA, an Alternative Plan must encompass the entire groundwater basin as defined by DWR. On January 1, 2017, OCWD and the overlying agencies within Basin 8-1, including IRWD, jointly prepared and submitted an alternative plan in compliance with SGMA (Basin 8-1 Alternative). The Basin 8-1 Alternative was updated in January 2022 (Orange County Water District; City of La Habra; Irvine Ranch Water District, 2022).

City of Tustin General Plan

The Tustin General Plan Conservation/Open Space/Recreation Element includes the following goals and policies that are related to water supply and the proposed Project.

Goal 5 **Protect water quality and conserve water supply.**

Policy 5.2 Protect groundwater resources from depletion and sources of pollution.

Policy 5.3 Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.

Policy 5.4 Support the expansion of reclaimed water production and use wherever possible and economically feasible.

Policy 5.5 Protect water quality by responsible agency support of enforcement of water quality standards for water imported into the County, and to preserve the quality of water in the groundwater basin and streams.

Policy 5.6 Coordinate water quality and supply programs with all responsible water agencies, and cooperate and participate in plan preparation and programs.

Tustin Legacy Specific Plan

The Tustin Legacy Specific Plan includes the following information related to water supply and the proposed Project.

Section 2.6 – Infrastructure

Water

The Specific Plan discusses that the TLSP area is serviced by the IRWD which supplies domestic water to the area through a north to south 12-inch pipeline in the center of the former base.

The TLSP also describes that the proposed backbone domestic water system was based on the IRWD SAMP, which recommends that pipe systems follow a loop pattern and provide service areas with multiple sources of supply. The TLSP further describes that the proposed domestic water system pipes were sized by IRWD based on demands, water pressure requirements, flow velocity criteria, and the fire-flow specifications of the Orange County Fire Authority (OCFA). However, surveys and more specific knowledge of the land use would be required to determine the network's final pipe sizes. However, the TLSP describes that final decision on water line locations and sizing shall be determined and approved by IRWD, in addition to the City Engineers of Tustin and Irvine, as applicable.

Reclaimed Water

The TLSP describes that reclaimed water is currently supplied to the TLSP area by IRWD through a 16-inch pipeline in Barranca Parkway as well as a 6-inch to 8-inch pipeline in Tustin Ranch Road.

The TLSP also includes a proposed reclaimed water plan for the area and describes that pipe sizes were determined by IRWD based on demands, water pressure requirements, and flow velocity criteria. However, surveys and more specific knowledge of the land uses would be required to determine the network's final pipe sizes.

Section 4.4 – Phasing Plan

Domestic (Potable)Water

To the maximum extent possible, the backbone water line system is anticipated to be phased along with the internal arterial highway construction program, since both are designed to serve geographic areas they develop. If any highways in which domestic water lines are to be located are actually built before their scheduled phase it will be recommended that water lines be installed at that time. In such cases, the line may be capped until connection is needed.

Reclaimed (Non-Potable) Water

To the maximum extent possible, the backbone water line system for reclaimed water will be coordinated with arterial highway construction. If any highways in which reclaimed water lines are to be located are actually built before their scheduled phase, it is recommended that water lines be installed at that time. In such cases, the line may be capped until connection is needed. Four potential well sites, generally located in the southerly portion of the project, will be the subject of subsequent negotiation, the results of which shall guide any conditions associated with well locations/relocations.

The Modified Project would be required to implement the TLSP Revised Phasing Plan as necessary, described above in Section 5.10.1.

Tustin City Code

Article 9, Chapter 7 – Water Efficient Landscapes. The City promotes water use efficiency through water efficient landscape requirements, which were adopted by Ordinance in December 2015. The code applies to new landscape projects of 500 square feet or greater and rehabilitated landscape projects of 2,500 square feet or greater. The code section provides implementation procedures and water use standards for the purpose of providing water efficient landscapes in compliance with State law.

Article 4, Chapter 10 – Water Management Plan. The City created a comprehensive Water Conservation Program pursuant to the California Water Code based upon the need to conserve water supplies and to avoid or minimize the effects of any future shortages. The Water Conservation Program establishes permanent water use restrictions and regulations to be implemented during times of declared water shortages. It establishes six (6) levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies.

Sections 4950 et seq. – Water Conservation Program. The City of Tustin's Water Conservation Program is set forth in Sections 4950 et seq. of the Tustin City Code. The Water Conservation Program consists of four stages of increasing restrictions on water use. Compliance with Stage 1 is voluntary, while compliance with stages 2 through 4 is mandatory. Stages 1 and 2 consist largely of restrictions on outdoor water use; while stages 3 and 4 also include restrictions on commercial, industrial, institutional, manufacturing or processing use.

5.10.2.2 Water Environmental Setting

Water is supplied to TLSP by the IRWD. IRWD provides water services to a 181-square mile service area that includes all of the City of Irvine and portions of the surrounding cities of Tustin, Santa Ana, Orange, Costa Mesa, Lake Forest, Newport Beach, and unincorporated areas of Orange County.

Water Supply and Demand

IRWD's water supply is a combination of groundwater, imported water, and recycled water. Approximately 50 percent of IRWD's water supplies comes from local groundwater wells in the Orange County Groundwater Basin (OC Basin), and the Irvine and Lake Forest sub-basins. Imported water from the Metropolitan Water District of Southern California (MWD) makes up less than one-fifth of IRWD's supply. Water imported to Orange County comes from two sources; the Sacramento-San Joaquin Delta in Northern California through the State Water Project (SWP), and from the Colorado River through the Colorado River Aqueduct. IRWD meets about a quarter of the service area's water demands with recycled water.

Table 5.10-2 provides IRWD's total projected supply capacities expected to be available to IRWD through 2040. These future planned water supplies are based on historical groundwater production, planned future supply projects, as well as information from Metropolitan and Municipal Water District of Orange County's (MWDOC) 2020 UWMPs.

Table 5.10-2: IRWD Projected Water Supply

Source	Additional Information on Source	Projected Water Supply (acre-feet)			
		2025	2030	2035	2040
Purchased or Imported Water	Potable	51,027	51,027	51,027	51,027
Surface Water (not desalinated)	Baker WTP Local Surface Water	3,048	3,048	3,048	3,048

Source	Additional Information on Source	Projected Water Supply (acre-feet)			
		2025	2030	2035	2040
Groundwater (not desalinated)	Potable	49,480	49,480	49,480	49,480
Purchased or Imported Water	Untreated	17,347	17,347	17,347	17,347
Recycled Water		42,012	42,012	42,012	42,012
Groundwater (not desalinated)	For Recycled System	3,461	3,461	3,461	3,461
Groundwater (not desalinated)	Future Potable Water	12,352	12,352	12,352	12,352
Total Projected Water Supplies		**178,727**	**178,727**	**178,727**	**178,727**

Source: (Irvine Ranch Water District, 2021)

The 2020 UWMP also describes that water demands per capita have been decreasing in recent years due to new state and local regulations related to water conservation. The 2020 UWMP describes that IRWD used 95 gallons per capita per day (GPCD) in 2020, which is below the target of 171 GPCD for 2020 (Irvine Ranch Water District, 2021). Table 5.10-2 summarizes IRWD's projected overall water supplies with project buildout as determined by IRWD (Appendix E). As shown in Table 5.10-3, IRWD has supply capabilities that would be sufficient to meet demands from 2025 to 2040 under the normal, single dry-year, and multiple dry years without the project and with project buildout. Thus, IRWD would continue to be able to utilize imported water supply, as needed.

Table 5.10-3: IRWD Supply and Demand with Project Buildout During Normal, Dry, and Multiple Dry Year Scenarios (AF)

Forecast Year	2025	2030	2035	2040	2044
Normal Year					
Maximum Supply Capability	101,911	104,711	104,711	104,711	104,711
Existing Demand	76,540	80,802	83,150	83,359	83,525
Existing Demand + Project	76,467	80,981	83,748	83,958	84,126
Cumulative Buildout Demand	76,467	80,981	83,748	83,958	84,126
Reserve Supply with Project	25,444	23,730	20,963	20,753	20,585
Single-Dry Year					
Maximum Supply Capability	99,863	102,663	102,663	102,663	102,663
Existing Demand	81,898	86,458	88,971	89,194	90,015
Existing Demand + Project	81,820	86,649	89,611	89,835	90,015
Cumulative Buildout Demand	81,820	86,649	89,611	89,835	90,015
Reserve Supply with Project	18,043	16,013	13,052	12,828	12,648
Multiple-Dry Year					
Maximum Supply Capability	99,863	102,663	102,663	102,663	102,663
Existing Demand	81,898	86,458	88,971	89,194	89,372
Existing Demand + Project	81,820	86,649	89,611	89,835	90,015
Cumulative Buildout Demand	81,820	86,649	89,611	89,835	90,015
Reserve Supply with Project	18,043	16,013	13,052	12,828	12,648

Notes: Existing Demand =4,970 dwelling units and 3,248,890 SF of nonresidential non-residential buildout
Project Demand =9,456 dwelling units and 3,248,890 SF of nonresidential buildout
Cumulative Buildout Demand = potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of IRWD's Water Resources Master Plan.
Source: Water Supply Assessment, Appendix E

Groundwater: As described previously, 50 percent of IRWD's water supply is groundwater that is pumped from the OC Basin as well as the Irvine and Lake Forest sub-basins. The OC Basin covers an area of approximately 350 square miles, bordered by the Puente Hills and Chino Hills to the north, the Santa Ana Mountains to the northeast, and the Pacific Ocean to the southwest. The basin boundary extends to the Orange-Los Angeles County line to the northwest. Replenishment supplies for the OC Basin include capture of increasing Santa Ana River flows, purified recycled water, purchases of replenishment water from Metropolitan, and expansion of local supplies (Irvine Ranch Water District, 2021). The basin directly underlying the TLSP area has experienced historical contamination and is not used as a resource for groundwater pumping (see Section 5.4, Land Use).

According to the UWMP, the Orange County Water District (OCWD) manages the areas of the Basin that are located within the OCWD boundary as described under the Orange County Water District Act, Water Code Application of Articles, Ch 40 (OCWD District Act) (Irvine Ranch Water District, 2021). OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County, as well as the management and replenishment of the Basin. The Irvine sub-basin is located within the OCWD boundary; however, the Lake Forest area sub-basin is outside of the OCWD boundary. While the majority of the groundwater rights of the producers within the Basin have not been adjudicated, IRWD holds an adjudicated right for up to 4,500 acre-feet (AF) of groundwater pursuant to a 1933 Judgment prior to OCWD. However, this adjudicated water right was quit-claimed to IRWD by the Irvine Company in 2006.

Further, OCWD manages the OC Basin through a Basin Production Percentage (BPP) that is determined each water year based on groundwater conditions, availability of imported water supplies, water year precipitation, Santa Ana River runoff, and basin management objectives. While there is no legal limit as to how much an agency pumps from the OC Basin, there is a financial disincentive to pump above the BPP. Groundwater production above the BPP is charged a Basin Equity Assessment (BEA) fee. The BEA is set so that the cost of groundwater pumping above the BPP is greater than the cost of imported water. Each year, OCWD sets a target amount of pumping, the BPP, and assesses a BEA on all water pumped above that limit. For example, if the BPP is set at 77 percent for 2023-2024, all pumpers within the Basin, including IRWD, can supply 77 percent of their water needs from groundwater supplies at a cost significantly less than the cost of imported water. If groundwater production is equal to or less than the BPP (i.e., less than 77 percent in the example above), all producers within the Basin pay a replenishment assessment fee which is used to fund groundwater replenishment and recharge programs aimed at ensuring the long-term viability and stability of the Basin. A component of OCWD's BPP policy is to manage the groundwater basin so that the BPP will not fluctuate more than 5 percent from year to year. OCWD anticipates being able to sustain the BPP at 85 percent starting in 2025 (Irvine Ranch Water District, 2021).

Imported Water: Approximately 13 percent of IRWD's potable water needs are met by imported water purchased and supplied by Metropolitan through MWDOC. IRWD receives imported potable water supplies from the Colorado River and the State Water Project (SWP) through Metropolitan's Diemer Filtration Plant and Weymouth Treatment Plant. IRWD also purchases untreated imported water supplied by Metropolitan through MWDOC. Untreated imported Colorado River water from Lake Mathews is supplied to the Baker Water Treatment Plant (Baker WTP). The Baker WTP, completed in 2016, is a 28.1 million gallon per day (mgd) drinking water treatment plant. Both Metropolitan and MWDOC's 2020 UWMP's describe in detail the assessment and summary of imported water service reliability outlook through 2045. Metropolitan finds that it has supply capabilities sufficient to meet expected demands from 2025 through 2045 in a normal year condition, under a single dry-year condition, and in a period of drought lasting five consecutive water years. IRWD has made conservative estimates of annual imported supplies based on connected imported water delivery capacity from historical use evaluations and based on Metropolitan's stated reliability through 2045. Additionally, IRWD can also recover and deliver supplemental water stored in its water banking projects in Kern County, California, to IRWD's service area under a short-term Metropolitan water supply allocation and major supply interruptions (Irvine Ranch Water District, 2021).

Surface Water: IRWD's local surface water sources are the drainage tributary areas to the Irvine Lake and Harding Canyon Reservoir. On average, approximately 4,000 AFY of local surface water is captured by Irvine Lake for IRWD's use. During dry years, IRWD's annual use of local surface water could be as little as 1,000 AFY. According to the UWMP, local surface water in Irvine Lake can be supplied for treatment as a potable water supply source with the newly operational Baker WTP. The Irvine Lake ownership is 75% to IRWD and 25% to Serrano Water District (SWD) with the right to divert and store up to 28,000 AFY. Local surface water supplies are distributed to IRWD and SWD based on an allocation formula in accordance with a 1928 Agreement, and subsequent amendments and agreements. The 1928 Agreement divides the stored local surface water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally yield three-fourths of the amount over 1,000 AF (Irvine Ranch Water District, 2021).

The other local surface water supply, or local runoff, available to IRWD is from the Harding Canyon Dam area via the Manning WTP, located in the Santiago Canyon area. The Manning WTP is located approximately 6,000 feet downstream of the Harding Canyon Dam. The Manning WTP has been expanded from an operational flowrate of 300 gallons per minute (gpm) to a 500 gpm capacity. The water supplies available from the Harding Canyon Reservoir are often limited due to dry weather conditions within the drainage area.

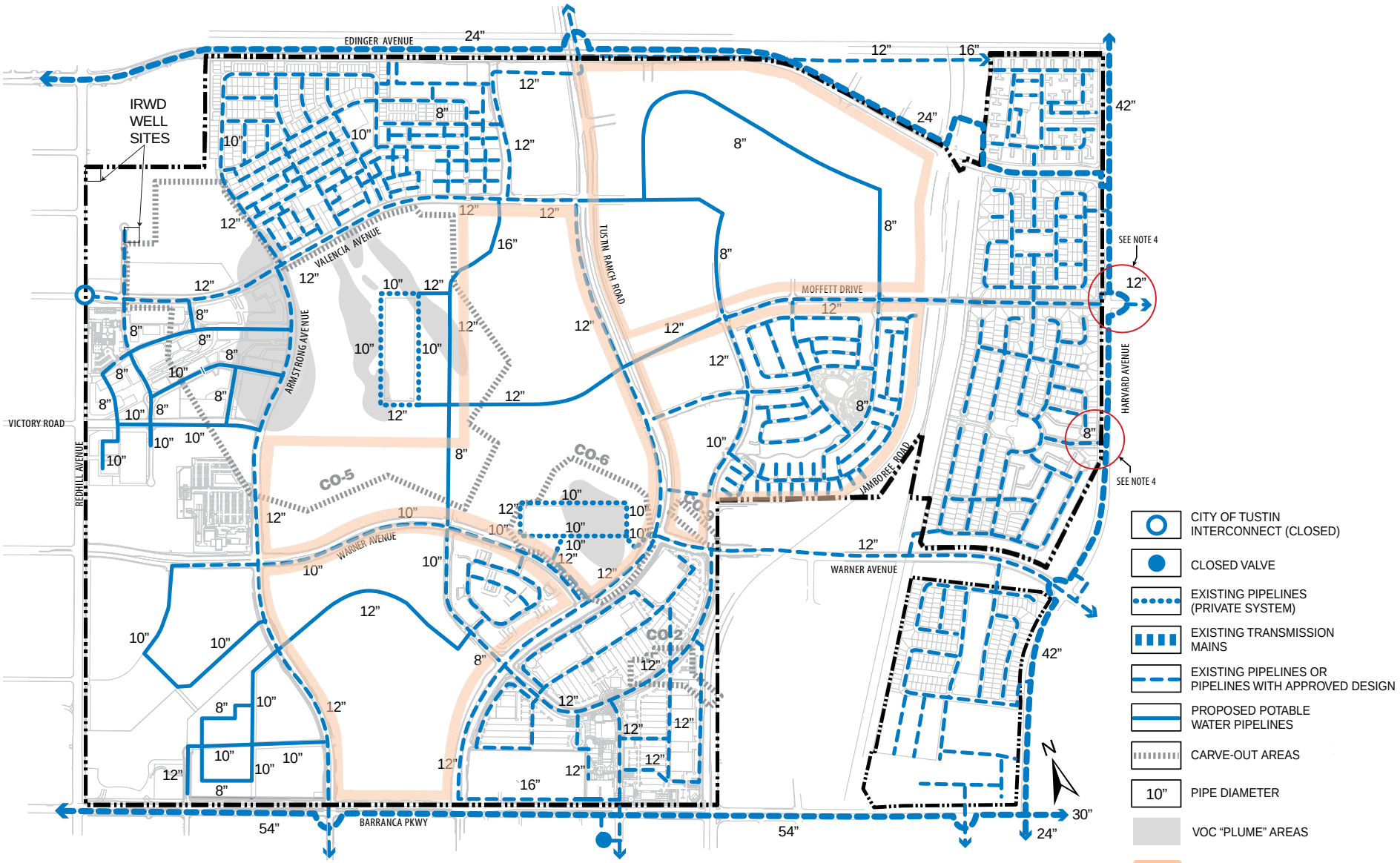
Recycled Water: Recycled water meets approximately one third of IRWD's water demands. In 1967, IRWD began sewage collection and tertiary treatment at its Michelson Water Recycling Plant (MWRP). At the time, recycled water was delivered solely to agricultural users. IRWD later expanded recycled water use to include other State-approved uses including landscape irrigation at parks, golf courses, school grounds and play fields, community associations, open space area, and green belts. IRWD eventually made recycled water available for front and backyard irrigation at large estate-sized residential lots, toilet and urinal flushing at large commercial dual-plumbed buildings, industrial uses, composting, construction dust control, compaction, and cooling tower applications. IRWD's recycled water program has allowed IRWD to reduce its demands for potable imported water and extend its drinking water supplies.

Water Infrastructure

The TLSP area potable water distribution system is owned and operated by IRWD. The IRWD SAMP for the TLSP area was updated by Michael Baker International on March 16, 2017. The updated SAMP includes updates to the potable water, wastewater collection, non-potable water distribution, and sewer infrastructure analysis to reflect land uses and buildout assumptions included within the Approved Project (2017 TLSP). Existing water infrastructure is shown in Figure 5.10-1, *Potable Water System*.

The ultimate backbone potable water distribution system proposed for the TLSP service area is based on a computer hydraulic model simulation. Most of the on-site backbone system has been constructed to date. The ultimate distribution system proposes to add service pipelines within Planning Areas 8, 9-12, 13-14, and 15A, which will also provide additional looping that will enhance system reliability and maximize capacity of the potable water system (Michael Baker, 2017). Further development of the distribution system is unknown at this time and will be constructed in accordance with the *Tustin Legacy Specific Plan Phasing Program*. Figure 5.10-1, *Potable Water System*, illustrates the proposed ultimate system for serving the TLSP area. Based on the analysis conducted for this SAMP Update as part of the Approved Project, no off-site potable water system improvements were identified as necessary.

Potable Water System



Source: Placeworks, 2017. *Tustin Legacy Specific Plan Amendment.*
Note: Several portions of the planned infrastructure depicted have been constructed since publication of the 2017 SEIR.

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5.10.2.3 Water Thresholds of Significance

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-1 Require or result in the construction of new water facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.

UT-2 Have sufficient water supplies available to serve the project and reasonably foreseeable development during normal, dry, and multiple dry years.

HYD-1 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

HYD-2 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

5.10.2.4 Water Service Methodology

The evaluation of water supply considers the amount of water that would be required to support operation of the proposed Project and compares the demand to IRWD's available water supply to identify if sufficient water supplies are available to serve the proposed Project and reasonably foreseeable development during normal, dry, and multiple dry years. Additionally, the water supply infrastructure in the Project area was identified and evaluated to ensure design capacity would be adequate to supply the Project site, or to identify if expansions would be required to serve the proposed development.

5.10.2.5 Water Environmental Impacts

Summary of Impacts Associated With the Approved Project

The FEIS/EIR determined that at buildout the Specific Plan would demand 2.8 million gallons per day (mgd) of water. All utility infrastructure would be designed to adequately accommodate development. The certified FEIS/EIR determined that impacts to potable water supply and distribution were less than significant with no mitigation required. Utilities would be replaced and sized to accommodate the proposed land uses.

The 2017 SEIR determined that the project would not result in any new impacts, or increase the severity of impacts, with respect to water supply or water facilities.

IMPACT UT-1: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW WATER FACILITIES, OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact with Mitigation.

As shown in Table 3-2, *Specific Plan Amendment Summary*, of this Draft SEIR, implementation of the Approved Project would result in the construction of 4,970 residential units and 3,248,890 SF of nonresidential building space. The Modified Project proposes an additional 2,211 dwelling units which would result in a total capacity of 6,697 residential units and 3,248,890 SF of nonresidential capacity within the TLSP area. However, the Modified Project also includes 2,759 density bonus units. Thus, total buildout of the Modified Project with the density bonus units would result in an overall net increase of 4,970 dwelling units compared to the Approved Project and a total development capacity of 9,456 dwelling units within the TLSP area. A specific development project is not proposed as part of this Project.

Currently, potable and recycled water mains exist beneath the developed streets of the Modified Project site such as Armstrong Avenue, Warner Avenue, Tustin Ranch Road, Valencia Avenue, and Edinger Avenue. Future implementation of development projects pursuant to the Modified Project would necessitate installation of onsite water infrastructure and new connections to the water distribution system that would be sized to accommodate the increased water demand of new project-specific development on a project-by-project basis. Under the City's normal development review procedure for individual projects, the City determines the actual water system design requirements of each site-specific development project, and the needs for any improvements to the existing water supply infrastructure would be identified and require approval prior to City issuance of the construction permit.

Construction

As currently proposed, the Modified Project would not be anticipated to necessitate offsite construction of new water facilities and existing water supplies would accommodate the Modified Project, as discussed in the Water Supply Assessment (Appendix E). The construction of any future water facilities potentially identified at a later date is not considered reasonably foreseeable and is not considered within this analysis. However, construction of future water line connections would occur along existing pipeline alignments and within existing street rights-of-way. Water line expansion could result in impacts related to polluted stormwater runoff, air quality and greenhouse gas (GHG), noise, and erosion.

All future projects are required to comply with all City standards regarding construction noise, air quality, and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls, as well as mitigation measures identified throughout this SEIR. Implementation of PPP HYD-1 would ensure that potential construction impacts on stormwater runoff related to any necessary future water line improvements remain less than significant. Further, PPP T-2 is incorporated into the Project to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for a Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. As discussed in Section 5.1 and Section 5.3, future construction of the Modified Project would result in less than significant air quality and GHG impacts with implementation of South Coast Air Quality Management District (SCAQMD) Rules 403, 431.2, 1113, and 1186 / 1186.1. In addition, SEIR MM AQ-5, which requires use of Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities. As a result, potential impacts related to build out of the proposed Project would not result in construction of new or expanded water facilities that would result in a significant environmental effect. Therefore, construction impacts would be less than significant.

Operation

IRWD purchases and imports water from MWD which is treated at the Robert Diemer Filtration Plant and the new Baker WTP. Under the Approved Project, the anticipated total water demand of the TLSP area was anticipated to be 2.0 mgd (1,968,801 gpd) (Placeworks, 2017). Previously, it was anticipated that the TLSP area would be serviced by the Robert Diemer Filtration Plant. However, the Baker WTP which was completed in 2016 to increase water supply reliability to South Orange County now serves the TLSP area and is expected to serve the area for the foreseeable future. The Baker WTP has a treatment capacity of 28.1 mgd (Irvine Ranch Water District, 2021). The Baker WTP currently treats approximately 6.78 mgd and has a remaining capacity of 21.32 mgd. The WSA determined that based on land use planning information available to IRWD and project information the Modified Project is anticipated to result in a total water demand of 2.72 mgd which the Baker WTP has capacity for (2,719,276 gpd) (Irvine Ranch Water District, 2024). Therefore, the Baker WTP is anticipated to be able to accommodate additional capacity proposed by the Modified Project.

The IRWD SAMP for the TLSP area was updated in 2017. Under the Approved Project, the Modified Project with potential density bonus units would result in an overall net increase of 4,970 dwelling units compared to the Approved Project. Therefore, the previously adopted SAMP does not meet the full potential demand of residential capacity that would be allowed under the Modified Project. Further, the Modified Project could result in the need for additional water facility improvements beyond those identified in the 2017 SAMP. Therefore, Mitigation Measure UT-1 requires that once the development assumptions of the IRWD SAMP are surpassed, the SAMP for the TLSP shall be updated in partnership of the City and applicant prior to issuance of the grading permit. Water supply design specifications for each future site-specific development project would be required to comply with the City of Tustin standards (per the California Building Code) regarding requirements for design and operation of water distribution facilities and would be verified during plan check (PPP UT-1). Additionally, as described above and shown in Table 5.10-1, the Approved Project included a Phasing Plan, intended to address the future utility and public service needs for the TLSP area via performance standards. Future development under the proposed Project would require utility improvements according to the Phasing Plan. Specifically, the installation of water distribution lines would be triggered upon determination by IRWD regarding the acceptability of the existing lines at the time of future development proposal (Mitigation Measure a). Through Mitigation Measure a., IRWD would ensure that future water facility improvements fit within the previously planned improvements of the TLSP and SAMP. In the event new water treatment facilities are required, additional environmental analysis under CEQA shall be conducted. However, at this time, expansion of existing or construction of new water treatment facilities are not anticipated or planned and operational impacts would be less than significant with mitigation.

IMPACT UT-2: IRWD WOULD HAVE SUFFICIENT WATER SUPPLIES AVAILABLE TO SERVE THE PROJECT AND REASONABLY FORESEEABLE DEVELOPMENT DURING NORMAL, DRY, AND MULTIPLE DRY YEARS.

Less than Significant Impact.

As mentioned previously, buildout of the Modified Project would result in a net increase of 4,970 dwelling units within the TLSP area which would result in increased generation of water demand. As described in Section 5.06, *Population and Housing*, the 4,970 additional residential units would generate an additional 13,817 residents compared to the previously forecasted 17,242 residents resulting in 31,059 total residents at build out and full occupancy.

A site-specific WSA was prepared for the Modified Project to identify the water demand of existing buildout of the site without the proposed Project, buildout of the site with the proposed Project, and future cumulative buildout during normal, dry, and multiple dry years. As shown in Table 5.10-2, *IRWD Projected Water Supply*, the WSA determined that the proposed Modified Project would result in an increase of several AFY during normal, dry, and multiple dry year scenarios. Additionally, as shown in Table 5.10-2, the WSA determined that with buildout of the Project, IRWD would have sufficient water supplies to serve the Modified Project and cumulative development during normal, dry, and multiple dry year scenarios through 2044. Therefore, implementation of the proposed Modified Project would result in a less than significant impact related to water supplies.

IMPACT HYD-1: THE PROJECT WOULD NOT SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT THE PROJECT MAY IMPEDE SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN.

IMPACT HYD-2: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN.

Less than Significant Impact.

OCWD serves as the groundwater manager over the OC Basin and sub-basins. OCWD adopted its first Groundwater Management Plan in 1989. In July 2015, OCWD updated the Groundwater Management Plan; however, this plan has been superseded by the Basin 8-1 Alternative Plan, which was adopted in 2022. The Modified Project site is mostly undeveloped and pervious except for an existing apartment community and subdivision in Neighborhood D South, the Legacy Magnet Academy and Tustin Blimp Hangar in Neighborhood D North, and two subdivisions and an apartment complex in Neighborhood G. Implementation of future development under the TLSP would increase the amount of impervious surface. Further, the Project site is not used for groundwater recharge and contains soils with poor infiltration capacity due to high groundwater levels onsite and groundwater contamination (Placeworks, 2017). As further described in Section 5.4, *Land Use*, the TLSP encompasses the former Marine Corps Air Station (MCAS) Tustin, which closed in 1999. Since then, groundwater and soil contaminated with Trichloroethylene, Trichloropropane, and other chlorinated hydrocarbons have been identified across several plumes as shown in Figure 5.4-2, *Hazardous Cleanup Sites*, of this DEIR. Site remediation efforts consisting of pumping and treating groundwater, in-situ bioremediation, and monitored natural attenuation are ongoing. The Basin 8-1 Alternative Plan further lists existing groundwater contamination sites within the OCWD Management Area and describes that the U.S. Navy is taking the lead in remediation of the former Tustin MCAS. As such, the Project site is not in or near a groundwater recharge area/facility, nor does it represent a source of groundwater recharge. Therefore, the Modified Project would not substantially interfere with groundwater supplies or recharge. Impacts would be less than significant.

Additionally, groundwater supply and demand are evaluated through the UWMP and reevaluated through the Project-specific WSA which determined that groundwater supplies are sufficient to meet the demands of the Modified Project now and in the foreseeable future. The Project would not decrease groundwater supplies or interfere substantially with groundwater recharge. Therefore, the Modified Project would not conflict or obstruct the implementation of the Basin 8-1 Alternative Plan. Therefore, the proposed Modified Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

5.10.2.6 Water Cumulative Impacts

The geographic scope of cumulative analysis for water service is the service area of IRWD. Cumulative water supply impacts are associated with the adequacy of the IRWD's primary sources of water which include groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; recycled sewage; and supplemental imported water supplied by MWD through the MWDOC. As described above, water supplies have been planned through IRWD's 2020 UWMP, which identifies the ability to meet a majority of future water demands through groundwater and imported supplies. IRWD's UWMP and the Project-specific WSA provides projections for water supply and demand through 2044, and shows that in normal, dry, and multiple dry year conditions with anticipated growth in IRWD's service area, IRWD would be able to meet water demand. As a result, cumulative impacts would be less than significant.

5.10.2.7 Water Existing Standard Conditions and Plans, Programs, or Policies

Existing Regulations

The following standard regulations would reduce potential impacts related to water:

- California Code of Regulations Title 24, Part 11; the California Green Building Code
- Tustin City Code Article 9, Chapter 7; Water Efficient Landscapes

- Tustin City Code Article 4, Chapter 10; Water Management Plan

Plans, Programs, or Policies

PPP UT-1: California Building Code. All future development constructed under the Project shall be subject to the latest version of the California Building Code (CBC) which outlines regulations for building planning and construction in the state, including occupancy classification, structural design, building materials, infrastructure needs and fire-resistance requirements.

PPP HYD-1 SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.10.2.8 Water Level of Significance Before Mitigation

With implementation of existing Mitigation Measures (a) through (c), (e), and existing regulatory requirements, as well as proposed Mitigation Measure UT-1, which would be ensured through the City's development permitting process, Impact UT-1 would be less than significant. With implementation of existing regulatory requirements that would be ensured through the City's development permitting process, Impacts HYD-1 and HYD-2 would be less than significant. Impact UT-2 would be less than significant

5.10.2.9 Water Mitigation Measures

MCAS FEIR/EIS Implementation Measures Applicable to the Proposed Project

MM (a) The City of Tustin or City of Irvine, as appropriate, shall ensure that infrastructure is constructed in phases as triggered by identified thresholds in Table 4-2 of the revised Specific Plan Phasing Plan, Phasing Plan Requirements. The Phasing Plan provides an organizational framework to facilitate development of the reuse plan area in tandem with infrastructure necessary to support the planned development.

This framework reflects the fact that each component of the infrastructure has its own threshold for accommodating additional development toward build-out of the reuse plan area. The triggering mechanisms that identify timing of key infrastructure provisions are summarized in Table 4-2 of the revised Specific Plan Phasing Plan, Phasing Plan Requirements

MM (b) Prior to a final map recordation (except for financing and re-conveyance purposes), the development applicant shall enter into an agreement with the City of Tustin and City of Irvine and any appropriate regional utility agencies, districts, and providers, as applicable, to dedicate all easements, right-of-way, or other land determined necessary to construct

adequate utility infrastructure and facilities to serve the project as determined by the City, Agency, District, or other providers.

MM (c) Prior to any final map recordation (except for financing and conveyance purposes), the development applicant shall enter into a secured agreement with the cities of Tustin and/or Irvine, as applicable, to participate on a pro-rated basis in construction of capital improvements necessary to provide adequate utility facilities.

MM (e) Prior to the issuance of permits for any public improvements or development project, a development applicant shall submit to the City of Tustin and City of Irvine, as applicable, information from IRWD which outlines required facilities necessary to provide adequate potable water and reclaimed water service to the development.

Proposed Specific Plan Amendment Project Mitigation Measures

MM UT- 1 Prior to project approval, the development applicant shall coordinate with IRWD to conduct infrastructure analyses of water and sewer utilities in the project area to ensure existing conveyance and pressure is adequate to serve the project. Once development assumptions identified within the IRWD-approved Sub Area Master Plan (SAMP) are surpassed, project applicants shall coordinate with IRWD to update the SAMP for the TLSP area.

5.10.2.10 Water Level of Significance After Mitigation

No significant unavoidable adverse impacts related to water supplies or water infrastructure would occur.

5.10.3 WASTEWATER

5.10.3.1 Wastewater Regulatory Setting

National Pollution Discharge Elimination System Permit

The NPDES permit system was established in the Federal Clean Water Act to regulate both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the U.S. for point source discharges, such as sewer outfalls, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge.

State Water Resources Control Board Statewide General Waste Discharge Requirements for Sewer Systems

The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SWRCB Order No 2006-0003-DWQ) applies to sanitary sewer systems that are greater than one mile long and collect or convey untreated or partially treated wastewater to a publicly owned treatment facility. The goal of Order No. 2006-0003 is to provide a consistent statewide approach for reducing Sanitary Sewer Overflows (SSOs), which are accidental releases of untreated or partially treated wastewater from sanitary sewer systems, by requiring that:

1. In the event of an SSO, all feasible steps be taken to control the released volume and prevent untreated wastewater from entering storm drains, creeks, etc.

2. If an SSO occurs, it must be reported to the SWRCB using an online reporting system developed by the SWRCB.
3. All publicly owned collection system agencies with more than one mile of sewer pipe in the state must develop a Sewer System Management Plan (SSMP), which must be updated every five years.

The IRWD updated its SSMP in 2018 in compliance with these requirements.

City of Tustin General Plan

The Tustin General Plan includes few goals and policies related to wastewater, as IRWD and the Orange County Sanitation District are the wastewater service providers for, and owner of, wastewater facilities within the City. The City's General Plan Housing Element includes the following policy:

2.8 (New) Tustin Legacy Specific Plan Improvement Program

Tustin Legacy (Tract 744.15) is a Master Planned Community that is currently being developed. Although the tract has been identified as low resource, it has been substantially enhanced with new resources within recent years including services and amenities such as elementary school, high school, Junior College, new grocery store, shopping and dining, medical offices, Acute Rehabilitation Center, Animal Shelter, Sherriff Academy, Transitional and Emergency shelters, Sports Park, and County Facility for abused and neglected women and children. In addition, substantial infrastructure has and will continue to occur such as water, power, sewer, streets, sidewalks, pedestrian walkways, landscaping, and water treatment facilities. The area comprises 1,600 acres, of which 600 acres remain for future development of a diverse housing stock, community amenities, and resources. By 2029, the City will continue to implement projects that increase assets in the TLSP area as proposed by developers and identified in the Tustin Legacy Backbone Infrastructure Program, which includes:

- The Landing at Tustin Legacy: residential projects with development of open space, park areas, and community amenities
- Tustin Legacy Linear Park at Armstrong Avenue and Warner Avenue
- Alley Grove Public Promenade and recreational courts
- Neighborhood D South Infrastructure Construction - Phase 2
- South Hangar Historic Resource Renovation and Preservation Renovation
- Armstrong Avenue Pedestrian Bridge
- Warner Avenue Pedestrian Bridge
- Tustin Legacy Community Dog Park
- Police substation at Tustin Legacy

Additionally, the City's General Plan Public Safety Element includes the following policy under Goal 4 to reduce the risk to the community's inhabitants from exposure to hazardous materials and wastes.

Policy 4.10 Regulations governing the discharge of hazardous waste into sewer systems will be strictly enforced.

Tustin Legacy Specific Plan

The Tustin Legacy Specific Plan includes the following information related to wastewater and the Modified Project.

Section 2.6 – Infrastructure

Sewer

The TLSP area is serviced by the IRWD and Orange County Sanitation District #7 (CSD-7). However, IRWD is the sole responsible agency for the provision of sewer service for the area.

The sewer plan included in the Approved Project delineates sewer flows moving south and connecting to a proposed sewer main in Barranca Parkway. According to the TLSP, sewage will be conveyed through a trunk system in Armstrong Avenue through the City of Irvine. In addition, future studies with more accurate survey data would be required to determine final tie-in points and maintenance responsibilities.

Section 4.4 – Phasing Plan

Sanitary Sewer

To the maximum extent possible, the backbone sanitary sewer system will be coordinated with the arterial highway construction. If any highways in which sanitary sewer lines are to be located are built before their scheduled phase, it will be recommended that the sewer line be installed at that time. In such cases, the line may be capped until connection is needed.

The Modified Project would be required to implement the TLSP Revised Phasing Plan as necessary, described above in Section 5.10.1.

5.10.3.2 Wastewater Environmental Setting

Conveyance

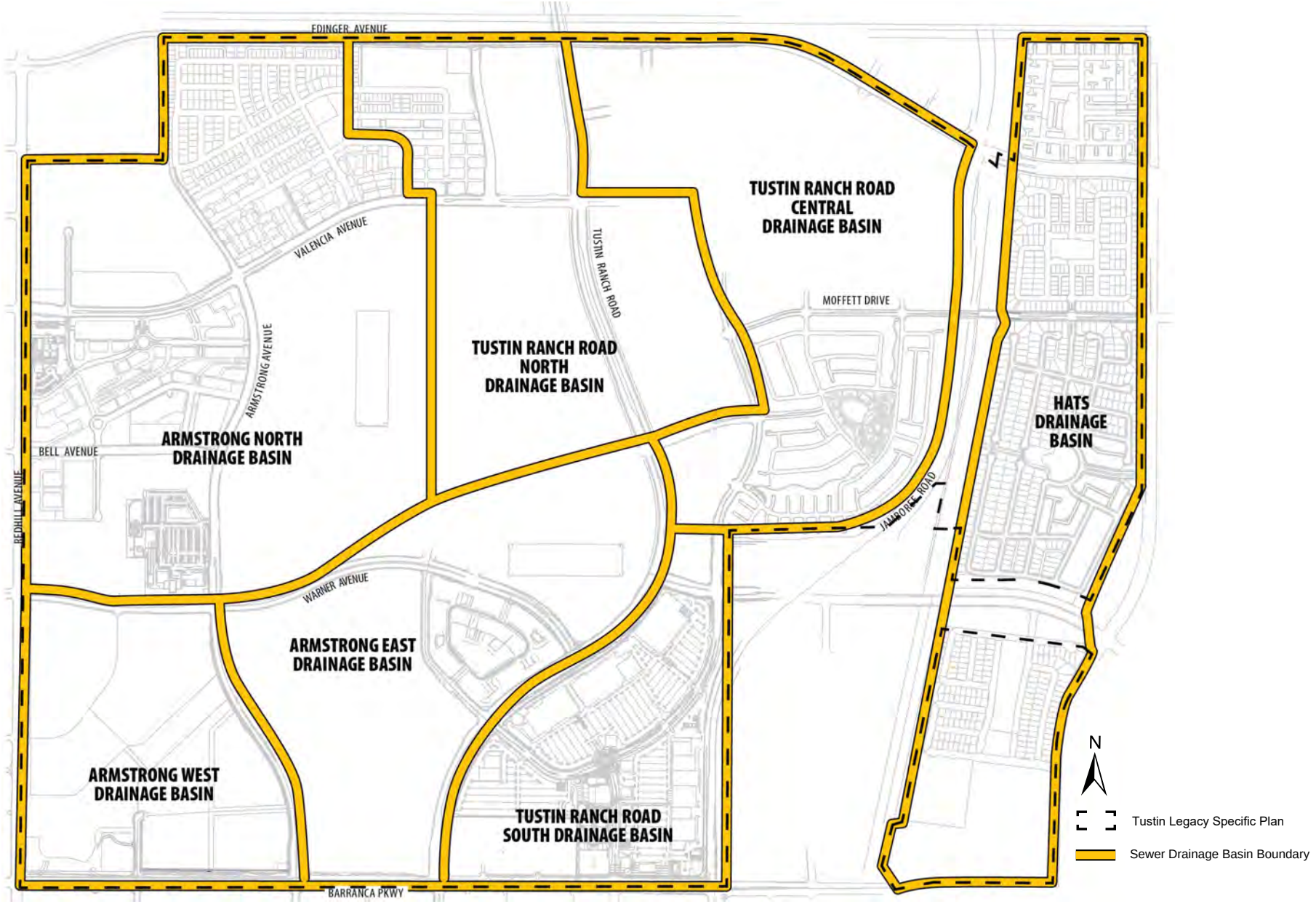
The IRWD collects and conveys wastewater from the TLSP area through its regional collection systems in Harvard Avenue (which runs north-south and abuts the eastern boundary of the TLSP area) and Armstrong Avenue (which runs north-south within the western portion of the TLSP area). The TLSP area west of Peter's Canyon Channel, Planning Areas 1 through 19 (see Figure 3-7, *Existing TLSP Land Use Plan*), including all the City's Disposition Areas, generally flow west to the 20-inch Tustin Ranch Road trunk sewer system or to the 27-inch trunk sewer system in Armstrong Avenue. The vast majority of the flows of the TLSP area are served by the Armstrong Avenue trunk sewer system. From the confluence of these two onsite trunk systems at Armstrong Avenue and Barranca Parkway, project area tributary flows are conveyed southwesterly through the Armstrong Avenue, MacArthur Boulevard, and Main Street trunk sewer systems to OCSD's treatment facility—Reclamation Plant No. 1. The Armstrong Avenue trunk sewer system is proposed to serve Planning Areas 1, 2, 3, and 9 through 12, as well as portions of Planning Areas 4, 5, 8, 13, and 14. The sewer drainage basins are shown in Figure 5.10-2, *Sewer Drainage Basins*.

IRWD collects and treats nearly all the sewage generated within the IRWD service area. Sewage collected through IRWD's system is sent to one of the two IRWD water recycling plants, the Michelson Water Recycling Plant (MWRP) or the Los Alisos Water Recycling Plant (LAWRP). Most of the sewage generated in IRWD's service area is treated to disinfected, tertiary recycled water standards. It is used within the service area for non-potable purposes, thus offsetting potable water demands.

Wastewater Treatment

According to IRWD, current sewage flows from the Tustin Legacy Specific Plan area are conveyed to Orange County Sanitation District (OCSD) (Lindsay, 2024). The Orange County Sanitation District (OC San) is a public agency that provides wastewater collection, treatment, and disposal services for approximately 2.6 million people in central and northwest Orange County. Reclamation Plant No. 1, the wastewater treatment plant that services the TLSP area, is in the City of Fountain Valley and has a capacity of 204 mgd for advanced primary and secondary treatment. In 2021-2022, the reported average daily flow of wastewater received was a total of 179 million gallons per day (MGD) (Orange County Sanitation District, 2024).

Sewer Drainage Basins



Source: Placeworks, 2017. *Tustin Legacy Specific Plan Amendment.*
Note: Several portions of the planned infrastructure depicted have been constructed since publication of the 2017 SEIR.

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5.10.3.3 Wastewater Thresholds of Significance

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-3 Require or result in the construction of new wastewater facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects; or

UT-4 Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

5.10.3.4 Wastewater Service Methodology

The evaluation of wastewater infrastructure quantifies the amount of wastewater that would be generated from operation of the proposed Project and compares the demand to the existing and planned sewer infrastructure in the Project area and wastewater treatment plant that treats flows from the Project site. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

Under the SEIR certified for the Approved Project, the SAMP that was prepared for and incorporated into the Approved Project included wastewater flow estimates that were used to identify future planned improvements for the sewer system serving the TLSP area. However, IRWD has provided updated wastewater generation rates since certification of the 2017 SEIR (Lindsay, 2024). Previous generation factors included 225 gallons per day (gpd) per dwelling unit (du) per day for low density residential, 200 gpd/du/day for medium density residential, 130 gpd/du/day for medium-high density residential, and 130 gpd/du/day for high density residential (Michael Baker, 2017).

Based on the updated information provided by IRWD, average wastewater flow rates for uses within the City of Tustin are estimated to be 160 gpd/du/day for medium density residential and 100 gpd/du/day for high density residential (Lindsay, 2024). The average wastewater generation for low density residential within the City of Tustin was measured to be 450 gal/du/day; however, it was noted that the rate is likely skewed since it is based on data collected from older homes with outdated water fixtures that utilize much more water than modern day fixtures. Therefore, the City of Irvine's wastewater generation factor of 215 gpd/du/day is more representative of what the average wastewater generation rate would be for a typical single-family home constructed in the City of Tustin under current building code requriements.

5.10.3.5 Wastewater Environmental Impacts

Summary of Impacts Associated with the Approved Project

The 2001 FEIS/EIR determined that at buildout of the MCAS Tustin Specific Plan, the project area would generate approximately 2.5 mgd of wastewater, with a peak flow of 7.7 mgd. The 2001 FEIS/EIR determined that impacts to wastewater conveyance and treatment were less than significant with no mitigation required. Existing wastewater infrastructure required to serve development under the Adopted Specific Plan would be replaced and sized to accommodate the proposed land uses.

Under the SEIR certified for the Approved Project, the SAMP that was prepared for and incorporated into the Approved Project included wastewater flow estimates that were used to identify future planned improvements for the sewer system serving the TLSP area. According to the 2017 SAMP, the TLSP area was anticipated to generate a total of 1,871,614 gpd, which includes anticipated buildout of 7,190 total dwelling units and 9,678,139 sf of nonresidential use (Placeworks, 2017). The 2017 SEIR determined that

the project would not result in any new impacts, or increase the severity of impacts, with respect to wastewater conveyance or treatment.

IMPACT UT-3: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW WASTEWATER FACILITIES, OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

IMPACT UT-4: THE PROJECT WOULD RESULT IN A DETERMINATION BY THE WASTEWATER TREATMENT PROVIDER THAT WOULD SERVE THE PROJECT THAT IT HAS ADEQUATE CAPACITY TO SERVE THE PROJECTS PROJECTED DEMAND IN ADDITION TO EXISTING COMMITMENTS.

Less Than Significant Impact with Mitigation.

As shown in Table 3-2 of this DSEIR, implementation of the Approved Project would result in the construction of 4,970 residential units and 3,248,890 SF of nonresidential building space. The Modified Project proposes an overall net increase of 4,970 dwelling units compared to the Approved Project and a total development capacity of 9,456 dwelling units within the TLSP area. A specific development project is not proposed as part of this Project.

As described within the SEIR for the Approved Project, the majority of the onsite sewer collection system for the TLSP area is constructed and in operation. The Modified Project site (Planning Area 8, 13-14, and 15) is still in the early planning stages and mostly undeveloped. Sewer drainage basins are illustrated in Figure 5.10-2. Due to the flat topography of these planning areas, future development of in-tract sewer systems could be designed to flow in any direction. Multiple sewer options for these planning areas could optimize sewer flows through existing trunk sewer systems.

Currently, sewer mains exist beneath the developed streets of the Modified Project site, such as Armstrong Avenue, Warner Avenue, Tustin Ranch Road, and Moffett Drive. Under the Approved Project, there are several sewer connections and extensions proposed as well. Future implementation of development projects pursuant to the Modified Project would necessitate installation of onsite wastewater infrastructure and new connections to the sewer conveyance system that would be sized to accommodate the increased sewer demand of new project-specific development on a project-by-project basis. Under the City's normal development review procedure for individual projects, the City determines the actual sewer system design requirements of each site-specific development project, and the needs for any improvements to the existing sewer conveyance infrastructure would be identified and require approval prior to City issuance of the construction permit.

Construction of future sewer line connections would occur along existing pipeline alignments and within existing street rights-of-way. Sewer conveyance expansion would require construction activities, such as grading and trenching, which could result in impacts related to polluted stormwater runoff, air quality and greenhouse gas (GHG), noise, and erosion. All future projects are required to comply with all City standards regarding construction noise, air quality, and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls, as well as mitigation measures identified throughout this SEIR. Implementation of PPP HYD-1 would ensure that potential construction impacts on stormwater runoff related to any necessary future water line improvements remain less than significant. Further, PPP T-2 is incorporated into the Project to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for a Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. As discussed in Section 5.1 and Section 5.3, future

construction of the Modified Project would result in less than significant air quality and GHG impacts with implementation of South Coast Air Quality Management District (SCAQMD) Rules 403, 431.2, 1113, and 1186 / 1186.1. In addition, SEIR MM AQ-5 requires use of Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities. As a result, potential impacts related to the build out of the proposed Project would not result in construction of new or expanded water facilities that would result in a significant environmental effect. Therefore, construction impacts would be less than significant.

Wastewater generation estimated for the Approved Project was provided within the SAMP that was prepared for the TLSP. According to the SAMP and SEIR prepared for the Approved Project, the Approved Project was anticipated to generate 1,190,663 gallons per day (gpd) via residential uses and 805,971 gpd via nonresidential uses, for a total generation of 1,996,634 gpd. The Modified Project would increase the allowed residential capacity by 4,970 dwelling units compared to the Approved Project, for a new total TLSP development capacity of 9,456 dwelling units. Since certification of the approved SEIR, new data has been provided via IRWD to reflect the latest wastewater generation rates for the area. Under the Approved Project, residential uses within PAs 8, 13-14, and 15 (Modified Project site) would be anticipated to generate 448,600 gpd based on the updated generation rates provided. Residential uses within the Modified Project would be anticipated to generate 1,038,635 gpd within the Modified Project site, or approximately 590,035 gpd more than the Approved Project. When the additional sewer demand as a result of the Modified Project is added to the previously identified wastewater generation of the entire TLSP, the estimated wastewater generation would be 2,586,669 gpd (2.59 MGD). This total is likely a conservative estimate, as it does not account for future water and sewer efficiencies due to improved technologies and sustainability advancements.

Table 5.10-4: Estimated Residential Wastewater Generation by Modified Project

Use	Rate	Approved Project Residential (gpd)	Modified Project Residential (gpd)[1]	Modified Project - Approved Project
Single Family Residential	215	-	173,935	173,935
Multi-Family Residential	100	448,600	864,700	416,100
Total		448,600	1,038,635	590,035

Note: Totals within the table represent PAs 8, 13-14, and 15.
[1] Modified Project includes 2,759 density bonus units.

Current sewage flows from the TLSP are conveyed to OCSD Reclamation Plant No. 1. The wastewater treatment plant has a capacity of 204 mgd for advanced primary and secondary treatment. In 2021-2022, the reported average daily flow of wastewater received was a total of 179 million gallons per day (MGD) (Orange County Sanitation District, 2024). Therefore, the treatment plant has an estimated remaining capacity of 25 MGD and would have sufficient capacity to accommodate full potential buildout of the TLSP, which would generate a maximum of 2.59 MGD. The construction of a new wastewater treatment plant would not be required as a result of the Modified Project.

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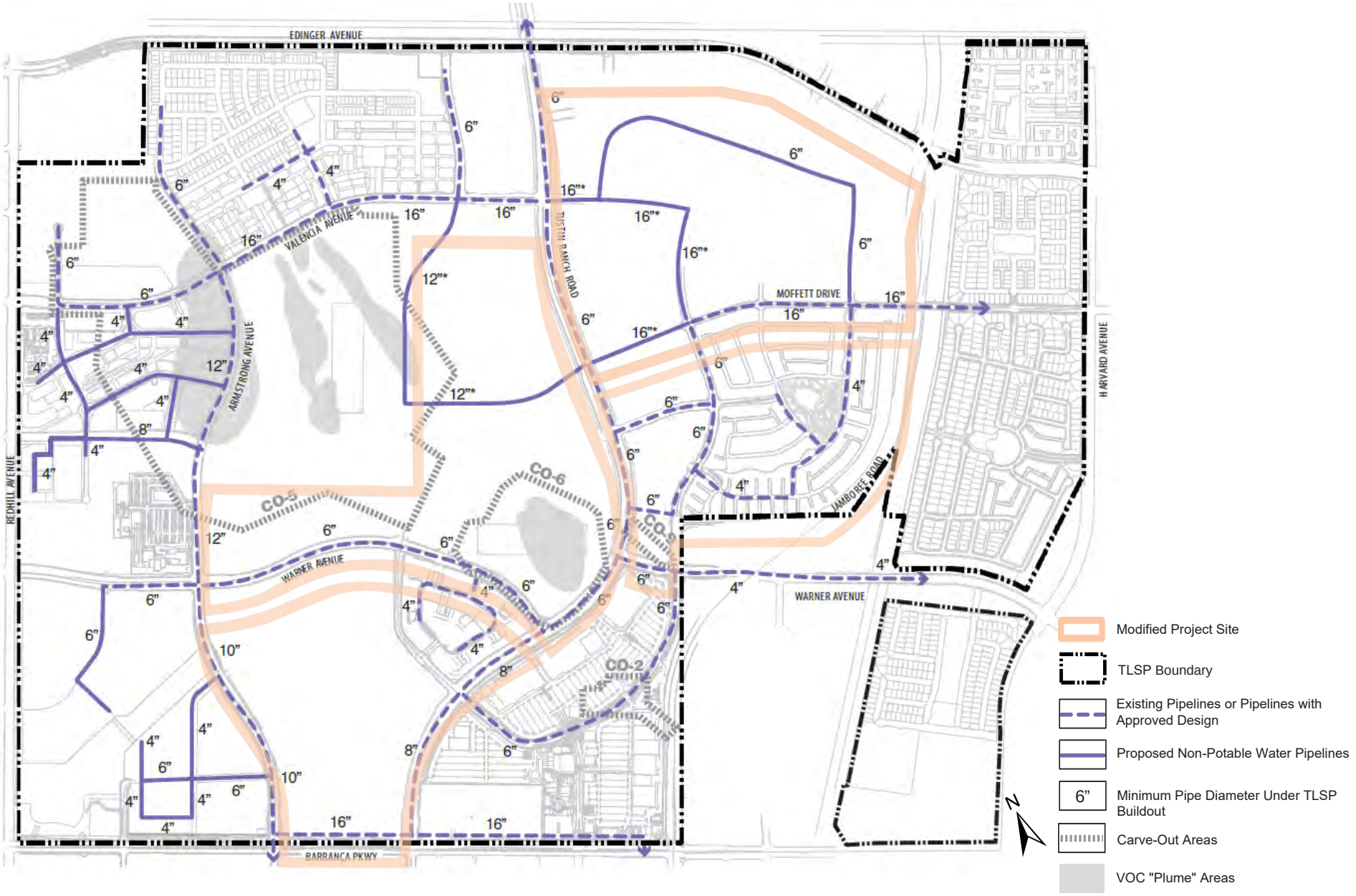
Non-Potable Water System



Source: Placeworks, 2017. *Tustin Legacy Specific Plan Amendment.*
Note: Several portions of the planned infrastructure depicted have been constructed since publication of the 2017 SEIR.

Although existing wastewater treatment facilities are anticipated to have sufficient capacity to accommodate the Modified Project, buildout of the Modified Project could surpass the wastewater generation volumes estimated under the existing TLSP SAMP. Further, future changes to the existing and planned IRWD sewer conveyance system described under the existing SAMP could be required. Mitigation Measure UT-1 has been included to require that prior to approval of a future project, the applicant is required to coordinate with IRWD to conduct infrastructure analyses of water and sewer utilities in the area to ensure existing conveyance and pressure is adequate to serve the proposed project. Additionally, once the development assumptions of the IRWD SAMP are surpassed, project applicants would be required to coordinate with IRWD to update the SAMP for the TLSP. Updates to the SAMP would ensure proper capacity and functioning of the sewer conveyance system for future developments. Future improvements would occur within existing roadway rights-of-way and easements. Therefore, the Modified Project would result in a less than significant impact related to the capacity, construction, and expansion of existing wastewater facilities.

5.10.3.6 Wastewater Cumulative Impacts

Cumulative wastewater infrastructure impacts are considered on a systemwide basis and are associated with the overall capacity of existing and planned infrastructure. The cumulative system evaluated includes the sewer system and the conveyance system through IRWD and treatment at OCSD's treatment facility—Reclamation Plant No. 1. As described previously, with the Modified Project, the sewer system would have sufficient capacity to handle the increased flows resulting from implementation of the Modified Project. Construction of new sewer connections and expansion to serve future development would be required to comply with applicable City, RWQCB, and SCAQMD rules and regulations, which would avoid impacts related to utility construction. The continued regular assessment, maintenance, and upgrades of the sewer system by IRWD and general technological advancement in the design and efficiency of residential and irrigation water fixtures would continue to reduce the potential for cumulative development projects to result in a cumulatively substantial increase in wastewater generation such that new or expanded facilities would be required. Thus, increases in wastewater in the sewer system would result in a less than significant cumulative impact.

5.10.3.7 Wastewater Existing Standard Conditions and Plans, Programs, or Policies

Existing Regulations

California Code of Regulations Title 24, Part 11; the California Green Building Code

Plans, Programs, or Policies

PPP UT-1: California Building Code. All future development constructed under the Project shall be subject to the latest version of the California Building Code (CBC) which outlines regulations for building planning and construction in the state, including occupancy classification, structural design, building materials, infrastructure needs and fire-resistance requirements.

PPP HYD-1 SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.10.3.8 Wastewater Level of Significance Before Mitigation

Impact UT-3 and UT-4 would be potentially significant.

5.10.3.9 Wastewater Mitigation Measures

2017 SEIR Mitigation Measures Applicable to the Proposed Project

MM (a) The City of Tustin or City of Irvine, as appropriate, shall ensure that infrastructure is constructed in phases as triggered by identified thresholds in Table 4-2 of the revised Specific Plan Phasing Plan, Phasing Plan Requirements. The Phasing Plan provides an organizational framework to facilitate development of the reuse plan area in tandem with infrastructure necessary to support the planned development.

This framework reflects the fact that each component of the infrastructure has its own threshold for accommodating additional development toward build-out of the reuse plan area. The triggering mechanisms that identify timing of key infrastructure provisions are summarized in Table 4-2 of the revised Specific Plan Phasing Plan, Phasing Plan Requirements

MM (b) Prior to a final map recordation (except for financing and re-conveyance purposes), the development applicant shall enter into an agreement with the City of Tustin and City of Irvine and any appropriate regional utility agencies, districts, and providers, as applicable, to dedicate all easements, right-of-way, or other land determined necessary to construct adequate utility infrastructure and facilities to serve the project as determined by the City, Agency, District, or other providers.

MM (c) Prior to any final map recordation (except for financing and conveyance purposes), the development applicant shall enter into a secured agreement with the cities of Tustin and/or Irvine, as applicable, to participate on a pro-rated basis in construction of capital improvements necessary to provide adequate utility facilities.

MM (e) Prior to the issuance of permits for any public improvements or development project, a development applicant shall submit to the City of Tustin and City of Irvine, as applicable, information from IRWD which outlines required facilities necessary to provide adequate potable water and reclaimed water service to the development.

Proposed Specific Plan Amendment Project Mitigation Measures

MM UT- 1 Prior to project approval, the development applicant shall coordinate with IRWD to conduct capacity analyses of water and sewer utilities in the project area to ensure existing conveyance and pressure is adequate to serve the project. Once development assumptions identified within the IRWD-approved Sub Area Master Plan (SAMP) are surpassed, project applicants shall coordinate with IRWD to update the SAMP for the TLSP area.

5.10.3.10 Wastewater Level of Significance After Mitigation

Impact UT-3 and UT-4 would be less than significant.

5.10.4 DRAINAGE

5.10.4.1 Drainage Regulatory Setting

Federal Facility Site Remediation Agreement

A Federal Facility Site Remediation Agreement (FFSRA) between the Department of the Navy (DON) and California Department of Toxic Substances Control was signed for Former Marine Corps Air Station (MCAS) Tustin on 18 August 1999. The FFSRA defines DON's response action obligations under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and corrective action obligations under the Resource Conservation and Recovery Act.

Santa Ana Regional Municipal Separate Storm Sewer System Permit

The Municipal Separate Storm Sewer System (MS4) Permit (Order No. R8-2009-0030) for the Santa Ana Region regulates urban runoff from areas under jurisdiction of the Permit's various permittees, which include Orange County, Orange County Flood Control District, and the incorporated cities within Orange County including the City of Tustin. When discharged, urban runoff (or stormwater) has the potential to mix with and carry various pollutants into receiving waters. The Permit lists allowable and unallowable discharges and requires implementation of low impact development (LID) infrastructure, which are engineered facilities that are designed to retain and/or biotreat runoff on the project site. Developments that qualify as New Development or Significant Redevelopment projects are considered priority projects and are required to develop a site-specific water quality management plan (WQMP), which includes site design, source control, and treatment control elements to reduce the discharge of pollutants in runoff. The WQMP is required to be approved prior to the issuance of a building or grading permit, and post-construction best management practices (BMPs) are required to be implemented. The MS4 Permit requires priority projects to infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85th percentile of a 24-hour storm event (Design Capture Volume). These treatment options must also consider existing groundwater contamination conditions and the approved Federal Facility Site Remediation Agreement (FFSRA) and Lease In Furtherance of Conveyance (LIFOC). The MS4 Permit also requires the evaluation and use of LID features using the following hierarchy of treatment: infiltration, evapotranspiration, harvest/reuse, and biotreatment.

Biotreatment BMPs are a broad class of LID BMPs that reduce stormwater volume to the maximum extent practicable, treat stormwater using a suite of treatment mechanisms characteristic of biologically active systems, and discharge water to the downstream storm drain system or directly to receiving waters. Treatment mechanisms include media filtration (through biologically-active media), vegetative filtration (straining, sedimentation, interception, and stabilization of particles resulting from shallow flow through vegetation), general sorption processes (i.e., absorption, adsorption, ion exchange, precipitation, surface complexation), biologically-mediated transformations, and other processes to address both suspended and dissolved constituents. Examples of biotreatment BMPs include bioretention with underdrains, vegetated swales, constructed wetlands, and proprietary biotreatment systems.

County of Orange Drainage Area Management Plan

The Drainage Area Management Plan (DAMP) is the County's primary policy, planning and implementation document for NPDES Permit compliance. The DAMP describes the agreements, structures and programs that:

- Provide the framework for the program management activities and plan development;
- Provide the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensure that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues;
- Ensure that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects (or priority projects) develop and implement a Preliminary WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. The WQMP is required to be prepared in accordance with the North Orange County Technical Guidance Document (TGD) which is provided as exhibit 7.III to the DAMP.

City of Tustin General Plan

The Land Use Element includes the following policy related to drainage facilities:

Goal 8 **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

Policy 8.5 Continue to make incremental improvements to the flood control and drainage system.

The Conservation/Open Space/Recreation Element includes the following policy related to drainage facilities:

Goal 8 **Conserve and protect significant topographical features, important watershed areas, resources, and soils.**

Policy 8.2 Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage improvements.

Tustin Legacy Specific Plan

The Tustin Legacy Specific Plan includes the following information related to drainage and the proposed Project.

Section 2.6 – Infrastructure

Storm Drainage

The TLSP area is proposed to be developed in phases as identified on Figure 2-28 of the TLSP Specific Plan. The backbone system will follow the alignments of the major arterial roadways, such as Armstrong Avenue, Valencia Avenue, Moffett Drive, Tustin Ranch Road, and Warner Avenue. The proposed storm drain plan includes five major on-site drainage areas with mainline facilities, as well as improvements to the OCFCD Barranca Channel. The local collector systems for each parcel will need to be studied as each parcel is developed.

The Project Report for the Peters Canyon Channel from San Diego Creek Channel to Santa Ana Freeway, dated September 1989, identifies the improvements required to carry the 100-year peak flows. The channel was originally recommended to be reconstructed as a concrete rectangular channel, with varying dimensions along its length. The Orange County Flood Control District has included improvements to Peters Canyon Channel in its 5-year plan for design and construction.

Section 4.4 – Phasing Plan

Storm Drain

The storm drain system will be constructed in phases generally in conjunction with arterial highway construction which provides maximum flood protection for existing and planned development and keep improvement costs to a minimum. While retention and/or detention basins may be useful in augmenting channel construction, that option will not be defined until subsequent studies are completed. On-site drainage improvements will be funded by the project through a likely combination of developer contributions, assessments or other financing mechanisms.

The Modified Project would be required to implement the TLSP Revised Phasing Plan as necessary, described above in Section 5.10.1.

Tustin City Code

Article 4, Chapter 8 – Floodplain Management.

Article 4, Chapter 9, Section 4902 - Control of Urban Runoff. This code section states that all new development and significant redevelopment within the City shall be undertaken in accordance with the County Drainage Area Management Plan (DAMP) and any conditions and requirements established by the City Community Development Department and Public Works Department, which are reasonably related to the reduction or elimination of pollutants in storm water runoff from the project site. Prior to the issuance by the City of a grading permit, building permit or nonresidential plumbing permit for any new development or significant redevelopment, the City Community Development Department shall review the project plans and impose terms, conditions, and requirements on the project.

5.10.4.2 Drainage Environmental Setting

Storm Drainage Facilities

Planning Area 20 was designated as a 100-year flood zone by the Federal Emergency Management Agency (FEMA). Peters Canyon Channel was also identified as a 100-year flood zone. The remainder of the TLSP area was determined to be outside of 100-year flood zones. TLSP development would require storm drainage improvements to reduce flood hazards in Planning Area 20. Impacts were identified as less than significant in the certified FEIS/EIR.

Implementation measures included in the 2004 Supplemental EIR required drainage studies and that projects make fair-share contributions to the Orange County Flood Control District for construction of flood control facilities required by the affected projects. No substantial change from previous analysis was identified in the 2006 Addendum.

In 2004, a Master Runoff Management Plan for Tustin Legacy (RBF Consulting) was approved by the City of Tustin. The Master Plan covered the ultimate buildout of the Tustin Legacy property, including all 22 Planning Areas and their ultimate land uses—e.g., residential, mixed use, commercial, and park space. A master backbone storm drain system was designed and sized to accommodate the ultimate buildout peak flow for each Planning Area and land use. The design of the master storm drain system also includes significant detention systems to control and manage downstream peak flows. Since the approval of the Master Plan, much of the backbone storm drain infrastructure and detention systems have been constructed.

The storm drain plan includes five major drainage areas with main line facilities and improvements to the OCFCD Barranca Channel. The backbone system follows the alignments of the major arterial roadways. The use of retention basins was also considered.

Groundwater

As described under Section 5.4, Land Use and Planning, the original Economic Development Conveyance (EDC) between the Navy and City governs how 1,153 acres of the 1,600-acre former MCAS Tustin was to be transferred to the City (the remaining acreage was conveyed directly to other entities and agencies) (City of Tustin, 2023). Of the 1,153 acres transferred to the City, 979 acres were deeded to the City in 2002. The remaining 174 of the 1,153 acres, which are not yet owned by the City, are under a Lease In Furtherance of Conveyance (LIFOC) between the Navy and the City. LIFOC grants the City a lease on the remaining properties while the Navy undertakes additional environmental investigation and/or remediation per the FFSRA agreement.

The 174 LIFOC acres have been separated into eleven "carve out" areas throughout the former Navy base, indicating areas with special hazardous (specifically groundwater and soil) contamination considerations. Groundwater contaminants within the carve outs include trichloroethylene, trichloropropane, jet fuel, petroleum hydrocarbons, volatile organic compounds, metals, and polynuclear aromatic hydrocarbons. These conditions were identified in the FEIS/EIR, and subsequent CEQA documentation, as resulting in a less than significant impact after remediation of environmental contamination, per existing federal and state regulatory compliance.

Since 2002, nine of the eleven carve-outs have met the set cleanup standards and have been conveyed to the City. Two of the eleven carve-outs, Carve Outs 5 and 6, have not yet met cleanup standards and remain under Navy management. Carve Outs 5 and 6 total approximately 114 acres.

Groundwater contamination is identified as occurring within several plumes that underly Carve Outs 5 and 6. Trichloroethylene, trichloropropane, and other chlorinated hydrocarbons were found in groundwater and soil. Site remediation consists of pumping and treating groundwater, in-situ bioremediation, and monitored natural attenuation. Existing groundwater contamination sources are shown in Figure 5.4-2, *Hazardous Cleanup Sites*.

5.10.4.3 Drainage Thresholds of Significance

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-5 Require or result in the construction of new stormwater drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.

HYD-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

5.10.4.4 Drainage Methodology

The evaluation of stormwater drainage infrastructure includes quantification of the amount of impervious surfaces and stormwater runoff that would be generated from the Modified Project and determination if runoff from the Modified Project would be accommodated by the existing stormwater drainage infrastructure. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

5.10.4.5 Drainage Environmental Impacts

Summary of Impacts Associated with the Approved Project

Impacts related to stormwater drainage facilities were previously analyzed for the Approved Project under the Initial Study Notice of Preparation (Appendix A of the 2017 Supplemental Environmental Impact Report [SEIR]). The 2017 SEIR determined that runoff rates and volumes from the site after buildout of Approved Project are expected to be reduced compared to buildout of the previous Adopted Specific Plan due to the conversion of nonresidential uses with greater impervious surface to residential uses with less impervious surface. Additionally, the MS4 Permit establishes increased requirements for detaining, infiltrating, evaporating, or transpiring stormwater onsite. Thus, the Approved Project buildout would not require construction of additional or expanded storm drainage facilities compared to implementation of the previous Adopted Specific Plan and no new significant impact would occur.

IMPACT UT-5: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW DRAINAGE FACILITIES, OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

IMPACT HYD-3: THE PROJECT WOULD NOT SUBSTANTIALLY ALTER THE EXISTING DRAINAGE PATTERN OF THE SITE OR AREA, INCLUDING THROUGH THE ALTERATION OF THE COURSE OF A STREAM OR RIVER OR THROUGH THE ADDITION OF IMPERVIOUS SURFACES, IN A MANNER WHICH WOULD CREATE OR CONTRIBUTE TO RUNOFF WATER WHICH WOULD EXCEED THE CAPACITY OF EXISTING OR PLANNED STORMWATER DRAINAGE SYSTEMS OR PROVIDE SUBSTANTIAL ADDITIONAL SOURCES OF POLLUTED RUNOFF.

Less Than Significant Impact With Mitigation.

In 2004, a Master Runoff Management Plan for Tustin Legacy (RBF Consulting) was approved by the City of Tustin. The Master Plan covered the ultimate buildout of the Tustin Legacy property, including all 22 Planning Areas and their ultimate land uses—e.g., residential, mixed use, commercial, and park space. A master backbone storm drain system was designed and sized to accommodate the ultimate buildout peak flow for each Planning Area and land use. The design of the master storm drain system also includes significant detention systems to control and manage downstream peak flows. Since the approval of the Master Plan, much of the backbone storm drain infrastructure and detention systems have been constructed.

As shown in Table 3-2 of this DSEIR, implementation of the Approved Project would result in the construction of 4,970 residential units and 3,248,890 SF of nonresidential building space. The Modified Project proposes an overall net increase of 4,970 dwelling units compared to the Approved Project and a total development capacity of 9,456 dwelling units within the TLSP area. A specific development project is not proposed as part of this Project.

The Modified Project includes a Specific Plan Amendment (SPA) to the TLSP, specifically regarding the maximum residential development capacity of PAs 8, 13-14, and 15. The Approved Project and existing TLSP anticipates full buildout of these PAs in the future. Therefore, the Modified Project does not propose expansion of the development area, but rather an increase in allowed development intensity. The Modified Project would provide a maximum increase of the allowed residential capacity for Neighborhood D (PA 8, 13-14) by 1,911 units (555 units + 1,356 buffer units). PA 8, 13-14 is currently designated within TLSP as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment. Although residential was not previously planned for PA 8, general development standards for the greater Neighborhood D portion of the TLSP would apply to future residential within PA 8. As described under

Section 3, Regulating Code, of the TLSP, all future developments with office and/or residential uses must dedicate five percent of the site to common open space/green room for office uses, and must provide 100 square feet (SF) to private open space and 100 SF to common open space per dwelling unit. Additionally, the existing Park Overlay assumes a minimum of 76 acres to be devoted to Tustin Legacy Park, which would be maintained under the Modified Project. The Modified Project would also allow for an increase in residential capacity of Neighborhood G (PA 15) by 200 dwelling units. Per the TLSP Regulating Code, future residential development proposed in PA 15 would be required to implement 100 SF of private open space and 200 SF of common open space per dwelling unit proposed.

Although the Modified Project would allow for intensified development, the allowed increase in residential capacity would likely be incorporated into future projects as a vertical component and through creative uses of mixed-use spaces rather than through increase in ground coverage. Further, the Modified Project would not be anticipated to result in a substantial increase in imperviousness. Requirements for waste discharge from developed land uses into stormwater were expanded in 2009 through the municipal stormwater permit (MS4 Permit, Order No. R8-2009-0030) issued by the Santa Ana RWQCB. The Orange County MS4 Permit, Order No. R8-2009-0030, NPDES Permit No. CAS618030, as amended by Order No. R8-2010-0062, is currently in effect for permittee entities within the County of Orange, which includes the City of Tustin. The previous orders, including Order No. R8-2002-0010, have been rescinded except for enforcement purposes for violations that occurred when they were in effect. The MS4 Permit requires low-impact development (LID) measures intended to preserve a site's predevelopment hydrology by minimizing the loss of natural hydrologic processes such as evapotranspiration, and runoff detention. LID measures introduce structural and nonstructural design components that restore these water quality functions into the project's land plan. The design and operations phases of projects developed pursuant to the Modified Project would comply with requirements in the MS4 Permit and would comply with additional requirements in the drainage area management plan issued by OC Public Works in 2003. A water quality management plan will be prepared for development projects pursuant to the MS4 Permit and subsequent projects will be required to comply with existing regulatory permitting processes.

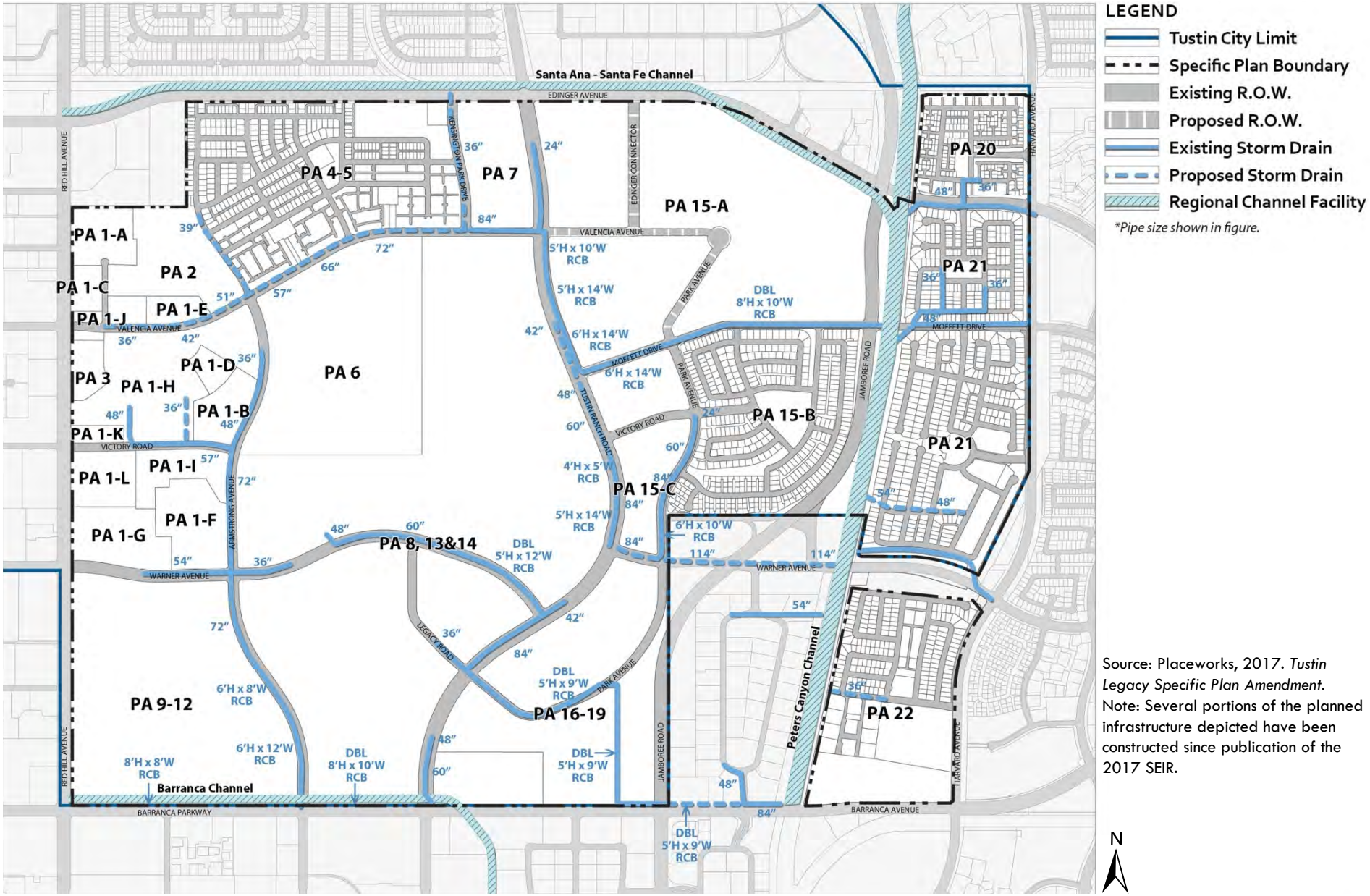
Construction of future projects under the Modified Project would also be subject to applicable regulations and permits that would avoid potential stormwater drainage impacts. Requirements for waste discharge from construction sites into stormwater were expanded in 2022 when the State Water Resources Control Board issued a new Statewide Construction General Permit (CGP) (Order 2022-0057-DWQ) and an amendment to the 2012 Permit (Order 2012-0006-DWQ). Under the 2022 CGP, SWPPPs are required to be prepared for projects exceeding an acre in size. Since 2009, SWPPPs must estimate sediment risk to receiving waters in addition to BMPs that must be implemented by a construction project. Additional BMPs are required as sediment risk to receiving waters increases.

Thus, the Modified Project would not require construction of additional or expanded storm drainage facilities compared to implementation of the Approved Project. Additionally, compliance with requirements of the aforementioned permit and plan, including LID requirements described above, would limit rates and volumes of runoff from the site. Construction projects pursuant to the Modified Project would prepare and implement SWPPPs specifying BMPs to be used in those projects, including erosion control and sediment control BMPs. Implementation of erosion control and sediment control BMPs would reduce erosion impacts from construction. Therefore, no substantial changes to the 2017 SEIR would be required. Previously adopted Mitigation Measures (f) through (k), which are incorporated as part of the TLSP Phasing Plan, would be applicable to all future developments. These measures enforce the applicable regulatory requirements of the RWQCB and state and federal flood control protections to mitigate any potential drainage or flood impacts of future projects. No new significant impact would occur.

5.10.4.6 Drainage Cumulative Impacts

The geographic scope for cumulative impacts related to stormwater drainage includes the geographic area served by the existing stormwater infrastructure for the TLSP area, from capture of runoff through final discharge points. As described above, the proposed Modified Project would not cause a substantial change in the amount of stormwater runoff from the TLSP area. As a result, the proposed Project would not generate additional runoff that could combine with runoff from cumulative projects that could cumulatively combine to impact drainage. Thus, cumulative impacts related to drainage would be less than significant.

Storm Drain Plan



Source: Placeworks, 2017. *Tustin Legacy Specific Plan Amendment.*
Note: Several portions of the planned infrastructure depicted have been constructed since publication of the 2017 SEIR.

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5.10.4.7 Drainage Existing Regulations and Plans, Programs or Policies

Plans, Programs or Policies

PPP HYD-1 SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 WQMP. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

PPP HYD-3 Flood Hazard. Prior to the approval of the Grading Plan and issuance of Grading Permits the City engineer shall ensure that the project complies with the requirements within Chapter 8, Floodplain Management, of the City Municipal Code Chapter 8, and any additional applicable requirements related to the applicable flood zone.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.10.4.8 Drainage Level of Significance Before Mitigation

Impact UT-5 and HYD-3 would be potentially significant.

5.10.4.9 Drainage Mitigation Measures

2017 SEIR Mitigation Measures Applicable to the Proposed Project

MM (f) Prior to the issuance of permits for any public improvements or development project, a development applicant shall submit to the City of Tustin and City of Irvine, as applicable, information from IRWD or the City of Tustin which outlines required facilities necessary to provide adequate sanitary sewage service to the development.

MM (g) Prior to the issuance of grading permits or approval of any subdivision map (except for financing and re-conveyance purposes), whichever occurs first, for development within the 100-year flood plain, grading and drainage systems shall be designed by the project developer such that all building pads would be safe from inundation from runoff from all storms up to and including the theoretical 100-year storm, to the satisfaction of the City of Tustin Building Division or the Irvine Public Works Department, as applicable. Grading permits or subdivision maps generated for financing and conveyance purposes are exempt.

MM (h) Prior to construction of regional flood control facilities, appropriate state and federal approvals, including agreements and permits, shall be obtained. These include but are not

limited to Regional Water Quality Control Board permits, including NPDES permits; Section 401 water quality certifications; Section 404 permits from the USACOE, and Section 1601 or 1603 agreements from the CDFG in a manner meeting the approval of the City of Tustin and the Irvine Public Works Department, as applicable.

MM (i) Prior to issuance of any grading permit or approval of any subdivision map (except for financing and conveyance purposes), for any development that is either partially or completely located within the 100-year flood plain of the Flood Insurance Rate Map, the development applicant shall submit all required documentation to the FEMA and demonstrate that the application for a Conditional Letter of Map Revision for changes to the 100-year flood plain is satisfied in a manner meeting the approval of each respective city, as applicable.

MM (j) Prior to the approval of any applicable subdivision map (except for financing and conveyance purposes), the developer - applicant shall design and construct local drainage systems for conveyance of the 10-year runoff. If the facility is in a local sump, it shall be designed to convey the 25-year runoff.

MM (k) Prior to any grading for any new development, the following drainage studies shall be submitted to and approved by the City of Tustin, City of Irvine, and/or OCFCD, as applicable:

(1) A drainage study including diversions (i.e., off-site areas that drain onto and/or through the project site), with justification and appropriate mitigation for any proposed diversion.

(2) A drainage study evidencing that proposed drainage patterns would not result in increased 100-year peak discharges within and downstream of the project limits, and would not worsen existing drainage conditions at storm drains, culverts, and other street crossings including regional flood control facilities. The study shall also propose appropriate mitigation for any increased runoff causing a worsening condition of any existing facilities within or downstream of project limits. Implementation of appropriate interim or ultimate flood control infrastructure construction must be included.

(3) Detailed drainage studies indicating how, in conjunction with the drainage conveyance systems including applicable swales, channels, street flows, catch basins, storm drains, and flood water retarding, building pads are made safe from runoff inundation which may be expected from all storms up to and including the theoretical 100-year flood.

5.10.4.10 Drainage Level of Significance After Mitigation

No significant unavoidable adverse impacts related to drainage would occur.

5.10.5 SOLID WASTE

5.10.5.1 Solid Waste Regulatory Setting

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location,

operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

California Assembly Bill 939

The California Integrated Waste Management Act (AB 939) made all California cities, counties, and approved regional solid waste management agencies responsible for enacting plans and implementing programs to divert 25 percent of their solid waste by 1995 and 50 percent by year 2000. Later legislation mandates the 50 percent diversion requirement be achieved every year.

California Assembly Bill 341

On October 6, 2011, Governor Brown signed AB 341 establishing a state policy goal that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020, and requiring CalRecycle to provide a report to the Legislature that recommends strategies to achieve the policy goal. AB 341 also requires businesses and multi-family residential dwellings of five units or more, that generate four or more cubic yards of commercial solid waste per week to implement recycling programs.

California Assembly Bill 1826

On September 28, 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste generated per week. This law requires that local jurisdictions implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings that consist of five or more units.

California Assembly Bill 827

Signed into law by Governor Newsom in 2019, AB 827 requires businesses subject to AB 1826 and AB 341 starting July 1, 2020, to provide customers with easily accessible recycling and organics collection bins or containers to collect these materials generated from products purchased on the premises.

California Senate Bill 1383

On September 19, 2016, Governor Brown signed SB 1383 establishing regulations aimed to reduce organic waste disposal 75 percent and reduce least 20 percent of currently disposed surplus edible food by 2025. The intent of the law is to reduce methane, increase landfill usage, and provide additional food sources for Californians.

California Green Building Standards

Section 5.408.1 Construction waste diversion. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste.

Section 5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

City of Tustin General Plan

The City's General Plan Conservation/Open Space/Recreation Element contains the following goals and policies related to solid waste services.

Goal 10 **Reduce solid waste produced within City.**

Policy 10.1 Implement policies of the adopted Tustin Source Reduction and Recycling Element and Household Hazardous Waste Management Element.

Policy 10.2 Ensure that the City diverts from landfills a maximum of 50% of the solid waste generated in the City as required by the California Integrated Waste Management Board.

Policy 10.3 Maximize public awareness of all source reduction programs, including opportunities for community feedback and school education.

Policy 10.4 Maximize integration of all source reduction programs.

Policy 10.5 Assist in the development of local, regional, and statewide markets for materials collected and processed through the source reduction programs.

Tustin Legacy Specific Plan

The Tustin Legacy Specific Plan does not include goals or policies related to solid waste and the Modified Project.

Tustin City Code

Tustin City Code Article 4, Chapter 3, Part 1, covers the general provisions regarding solid waste handling to protect the public health, safety and welfare and to meet the City's obligations under the California Integrated Waste Management Act of 1989 (AB 939). It also covers the provisions of the Mandatory Commercial Recycling requirements detailed in AB 341, the Mandatory Commercial Organics Recycling requirements detailed in AB 1826, the Mandatory Organics Collection requirements detailed in SB 1383 and Customer Access to Recycling requirements detailed in AB 827.

5.10.5.2 Solid Waste Environmental Setting

Solid waste services would be provided by the Orange County Waste and Recycling and CR&R Waste Services. In addition, the two closest landfills to the Project site are the Frank R. Bowerman Landfill in Irvine and the Olinda Alpha Sanitary Landfill in Brea. The Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and is permitted to operate through 2053. In January 2024, the maximum tonnage received was 8,710.78 tons. Thus, the facility had additional capacity of 2,789.22 tons per day (CalRecycle, 2024). Per a Solid Waste Facility Permit (SWFP) issued on July 8, 2021, the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. The Olinda Alpha Sanitary Landfill is permitted to operate through 2036. In January 2024, the maximum tonnage received was 8,404 tons, which is below the 10,000 tons per day that the facility is allowed to receive for 36 days of the year (CalRecycle, 2024).

5.10.5.3 Solid Waste Thresholds of Significance

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-6 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

UT-7 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

5.10.5.4 Solid Waste Methodology

Solid waste generation from construction and operation of the proposed Project was estimated using USEPA and CalRecycle solid waste generation factors derived for multi-family residential and commercial uses. Solid waste volumes were then compared with recent estimates of remaining disposal capacity of the landfill serving the City. In addition, potential impacts related to compliance with solid waste regulations were evaluated by identifying how the proposed Project would implement the relevant requirements.

5.10.5.5 Solid Waste Environmental Impacts

Summary of Impacts Associated with the Approved Project

The FEIS/EIR determined that impacts to solid waste disposal were less than significant with no mitigation required and future utilities would be replaced and sized to accommodate the proposed land uses.

The 2017 SEIR determined that the project would not result in any new impacts, or increase the severity of impacts, with respect to solid waste.

IMPACT UT-6: THE PROJECT WOULD NOT GENERATE SOLID WASTE IN EXCESS OF STATE OR LOCAL STANDARDS, OR IN EXCESS OF THE CAPACITY OF LOCAL INFRASTRUCTURE, OR OTHERWISE IMPAIR THE ATTAINMENT OF SOLID WASTE REDUCTION GOALS.

IMPACT UT-7: THE PROJECT WOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STATUTES AND REGULATIONS RELATED TO SOLID WASTE.

Less than Significant Impact.

The Project does not propose development; however, the Project would facilitate additional residential units within the Project site than previously planned. As such, future development within the Project site would generate an incremental increase in solid waste volumes requiring off-site disposal during short-term construction and long-term operational activities. Users of solid waste collection and disposal services would be required to pay service fees to the City's waste collection provider. As discussed above, solid waste generated by future development within the Project site could be disposed of at the Frank R. Bowerman Landfill and Olinda Alpha Sanitary Landfill.

No specific development is proposed at this time; however, the proposed Modified Project would increase the residential capacity by 4,970 dwelling units which would increase total development capacity to 9,456 dwelling units within the TLSP area.

Construction

Future project construction would generate solid waste for landfill disposal in the form of packaging and discarded materials that would be removed from the site. Construction waste would be properly characterized as required by law and recycled or disposed of at an appropriate type of landfill for such materials. Section 5.408.1 of the 2022 California Green Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Thus, the construction solid waste that would be disposed of at the landfill would be approximately 35 percent of the waste generated. As described above, Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. Both landfills would be able to accommodate the construction solid waste from the proposed Project. Therefore, impacts related to landfill facilities from construction activities would be less than significant.

Operation

Using solid waste generation rates provided by CalEEMod, operation of the Modified Project at buildout would generate approximately 5,775 tons of solid waste per year, at least 75 percent of which is required by California law to be recycled, which would reduce the volume of landfilled solid waste to approximately 1,444 tons per year, or 27.8 tons per week, as shown on Table 5.10-5.

Table 5.10-5: Estimated Solid Waste Demand from Operation of the Proposed Project

	Land Use	Quantity	Generation Rate	Solid Waste Demand
Approved Project	Residential	4,486 units	0.25 tons/unit/year	1122 tons per year
	Nonresidential	3,248,890 SF	1.05 tons/1,000 SF/year	3,411 tons per year
			Total Solid Waste (Approved Project)	**4,533 tons per year**
Modified Project	Residential	4,970 units	0.25 tons/unit/year	1,242 tons per year
	Nonresidential	No change	1.05 tons/1,000 SF/year	No change
			Total Solid Waste (Modified Project)	**1,242 tons per year**
Approved Project and Modified Project	Residential	9,456 units	0.25 tons/unit/year	2,364 tons per year
	Nonresidential	3,248,890 SF	1.05 tons/1,000 SF/year	3,411 tons per year
			Total Solid Waste (Approved + Modified Project)	**5,775 tons per year**
			Annual Landfill Disposal with AB 341 (75% Reduction)	**1,444 tons per year**
			Weekly Landfill Disposal with AB 341 (75% Reduction)	**27.8 tons per week**

Source: 2021 CalEEMod Solid Waste Generation Rates

As described above, Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. Therefore, both landfills would be able to accommodate the operational solid waste from future development under the proposed Project. Thus, future development under the proposed Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and the proposed Project would not impair the attainment of solid waste reduction goals. Thus, impacts related to landfill capacity would be less than significant.

Future projects implementing TLSP buildout would also be subject to Section 5.408.1 of the 2022 California Green Building Standards Code that requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Future projects implementing TLSP buildout would also be required to comply with all applicable State and local waste diversion requirements, including AB 939, AB 341, AB 1836, AB 827 and SB 1383. Therefore, the proposed Project would comply with all solid waste statute and regulations; and impacts would be less than significant.

5.10.5.6 Solid Waste Cumulative Impacts

Cumulative projects in the area would increase solid waste generation and decrease the available capacity of the nearby landfills. However, as with the proposed Project, cumulative projects have been or would be required to conduct an environmental review and would be required to adhere to solid waste regulations, which are aimed at reducing overall solid waste levels. Furthermore, both the Frank R. Bowerman landfill and the Olinda Alpha Landfill are forecasted to have sufficient capacity to serve current and future needs

until their scheduled closures in December 2053 and December 2036, respectively. Therefore, the increase in solid waste from future buildout of the proposed Project would be less than cumulatively considerable and would be less than significant.

5.10.5.7 Solid Waste Existing Standard Conditions and Plans, Programs, or Policies

The following standard regulations would reduce potential impacts related to solid waste:

- California Green Building Standards Code (**PPP UT-1**)
- Assembly Bill 939 (Chapter 1095, Statutes of 1989)
- Assembly Bill 341 (Chapter 476, Statutes of 2011)
- Assembly Bill 1826 (Chapter 727, Statutes of 2014)
- Assembly Bill 827
- Senate Bill 1383 (Chapter 395, Statutes of 2016)
- Tustin City Code Article 4, Chapter 3, Part 1

5.10.5.8 Solid Waste Level of Significance Before Mitigation

Impacts UT-6 and UT-7 would be less than significant.

5.10.5.9 Solid Waste Mitigation Measures

No new mitigation measures are required for the proposed Project.

5.10.5.10 Solid Waste Level of Significance After Mitigation

No significant unavoidable adverse impacts related to solid waste would occur.

5.10.6 DRY UTILITIES

5.10.6.1 Dry Utilities Regulatory Setting

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CalGreen) is updated every three years. The most recent update is the 2022 California Green Building Code Standards that became effective January 1, 2023. The 2022 CALGreen standards that are applicable to the proposed Project include, but are not limited to, the following:

- Electric vehicle charging stations. Facilitate the future installation of electric vehicle supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Title 24 Part 6 Table 5.106.8.
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads).
- Outdoor potable water used in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent.

City of Tustin General Plan

The City's General Plan Land Use Element contains the following policy related to dry utilities under Goal 8.

Policy 8.6 Encourage planned improvements to electricity, natural gas, and communication service systems.

Tustin Legacy Specific Plan

Section 4.4 – Phasing Plan

Electricity

To the extent possible, backbone electrical distribution lines will be installed underground at the same time as the on-site arterial highways are constructed to serve phased development.

Natural Gas

To the maximum extent possible, the backbone natural gas distribution lines will be installed underground at the same time as the on-site arterial highways are constructed to serve phased development.

The Modified Project would be required to implement the TLSP Revised Phasing Plan as necessary, described above in Section 5.10.1.

5.10.6.2 Dry Utilities Environmental Setting

Electricity

Electricity is provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons within its 50,000 square mile service area. According to SCE's 2022 Power Content Label Mix, SCE derives electricity from varied energy resources including: biomass and biowaste, geothermal, hydroelectric, solar, wind, nuclear, and natural gas. SCE also purchases power from independent power producers and utilities, which includes out-of-state providers (California Energy Commission, 2022).

Natural Gas

Natural gas would be provided to the Project by the Southern California Gas Company (SoCal Gas). SoCalGas provides natural gas to more than 21 million persons within its 24,000 square mile service area (SoCalGas, 2024).

Telecommunications

Telecommunications would be provided to the Project by AT&T and Cox Communications.

5.10.6.3 Dry Utilities Thresholds of Significance

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-8 Require or result in the relocation or construction of a new or expanded electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects.

5.10.6.4 Dry Utilities Methodology

The evaluation of dry utilities identifies if dry utility demand from the Modified Project would be accommodated via existing dry utility infrastructure available to the Modified Project. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

5.10.6.5 Dry Utilities Environmental Impacts

Summary of Impacts Associated with the Approved Project

The FEIS/EIR determined that impacts to electricity supply and distribution as well as natural gas supply and distribution were less than significant with no mitigation required and future utilities would be replaced and sized to accommodate the proposed land uses.

IMPACT UT-8: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF A NEW OR EXPANDED ELECTRIC POWER, NATURAL GAS, OR TELECOMMUNICATIONS FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact. No specific development is proposed at this time; however, implementation of the proposed Project would increase the residential capacity by 4,970 dwelling units which would result in a total development capacity to 9,456 dwelling units within the TLSP area in addition to the 3,248,890 SF of nonresidential building space. Future projects implementing TLSP buildout would generate demand for electricity, natural gas, communication systems, street lighting, and maintenance of public facilities.

Communication systems for the Project would be provided by AT&T and Cox Communications. AT&T and Cox Communications are private companies that provide connection to the communication system on an as needed basis. As such, the proposed Project is not anticipated to require or result in the construction of new communications facilities or the expansion of existing facilities. Impacts would be less than significant.

Electricity would be provided to the proposed Project by SCE. Adequate commercial electricity supplies are presently available to meet the incremental increase in demand attributed to the Project. Provision of electricity to the Project site is not anticipated to require or result in the construction of new facilities or the expansion of existing facilities, the construction or relocation of which would cause significant environmental impacts to electricity. Impacts would be less than significant.

Natural gas service would be provided by SoCal Gas. Adequate commercial gas supplies are presently available to meet the incremental increase in demand attributed to the Project. The proposed Project would not require or result in the construction, expansion, or relocation of natural gas facilities that could result in a significant environmental impact. Impacts related to natural gas would be less than significant.

Future project applicants implementing the buildout of TLSP would be required to comply with the TLSP Phasing Plan, as necessary. As described above, in Section 5.10.1, backbone electrical and natural gas distribution lines would be installed underground at the same time any on-site arterial highways within the TLSP are constructed, the construction of which would need to be analyzed in the corresponding environmental document.

In addition, future buildout of TLSP projects would be responsible for coordinating with each utility company to ensure utility improvements occur according to standard construction and operation procedures administered by the California Public Utilities Commission. Any development in the City would be required to comply with energy efficiency standards in Title 24 of the California Administrative Code, and appliance

efficiency regulations in Title 20 of the California Administrative Code, CALGreen. Therefore, potential impacts associated with utilities, including electricity, natural gas and communication systems would be less than significant and no mitigation is required.

5.10.6.6 Dry Utilities Cumulative Impacts

The geographic scope of cumulative analysis for dry utilities is the service area for the SCE, SoCalGas, AT&T and Cox Communications, which serve the Project area. Cumulative impacts related to the provision of facilities for electricity, natural gas, and communications systems have been evaluated throughout this EIR. Mitigation measures have been recommended in cases where cumulatively considerable impacts associated with utilities infrastructure were identified. Therefore, cumulatively considerable impacts associated with the provision of utility facilities to serve the Project would be less than significant.

5.10.6.7 Dry Utilities Existing Standard Conditions and Plans, Programs, or Policies

The following standard regulations would reduce potential impacts related to dry utilities:

- California Code of Regulations Title 24, Part 11; the California Green Building Code (**PPP UT-1**)
- California Code of Regulations Title 24, Part 11; the California Green Building Code (**PPP UT-1**)

5.10.6.8 Dry Utilities Level of Significance Before Mitigation

Impact UT-8 would be less than significant.

5.10.6.9 Dry Utilities Mitigation Measures

No new mitigation measures are required for the proposed Project.

5.10.6.10 Dry Utilities Level of Significance After Mitigation

No significant unavoidable adverse impacts related to dry utilities would occur.

5.10.7 REFERENCES

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6. Other CEQA Considerations

6.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

State CEQA Guidelines Section 15126.2(c) requires an EIR to describe "any significant impacts, including those which can be mitigated but not reduced to a level of insignificance." The analysis in Chapter 5 of this Draft SEIR determined that implementation of the Modified Project would result in environmental impacts that cannot be reduced to a level below significance after implementation of Project design features; regulatory requirements; plans, programs, policies; and feasible mitigation measures. The significant impacts that cannot be mitigated to a level below significance are summarized below.

6.1.1 Air Quality

Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard (Project-level and Cumulative).

Implementation of the Modified Project would result in long-term emissions of criteria air pollutants from area sources generated by future potential additional residential uses, such as vehicular emissions, natural gas consumption, landscaping, applications of architectural coatings, and use of consumer products. Therefore, the City has included Mitigation Measures AQ-1 though AQ-4, which require distribution of trip reduction opportunities, prohibition of fireplaces, required use of electric landscaping equipment, and use of low VOC paint, which would reduce emissions. Additionally, future projects would be required to implement existing SEIR MMs AQ-3, AQ-4, and AQ-5 that would require implementation of various trip reduction measures for nonresidential and mixed-use projects. However, the majority of the Modified Project's emission exceedances are from vehicular trips consumer products that the City cannot control emissions of; and therefore, cannot feasibly be reduced below the SCAQMD thresholds. As a result, impacts from operations of the proposed Tustin Legacy Specific Plan (TLSP) Amendment (SPA) would be significant and unavoidable, which is consistent with the findings of the 2017 SEIR. However, the volume of emissions would be increased in comparison to the buildout of the existing TLSP and would result in an increase in severity of the impact.

Impact AQ-3, Expose sensitive receptors to substantial pollutant concentrations (Project-level and Cumulative).

Consistent with the existing buildout of the TLSP, the buildout of the proposed TLSP Amendment, could result in construction adjacent to sensitive receptors. Existing sensitive air quality receptors outside of the TLSP area where someone can remain for 24-hours in the vicinity of the Modified Project site consists of residences. The closest existing sensitive receptors are residences, The Bowery, located approximately 140 feet west of the TLSP boundary (see Figure 5-1, *Cumulative Projects*). However, in consideration that buildout of the TLSP has and will continue to occur over multiple phases, future sensitive receptors within 50 feet of the Modified Project site have been conservatively considered for analysis of the Modified Project site (to account of existing and future onsite and offsite receptors). As detailed in Table 5.1-8, the LST emissions within this construction scenario would not exceed the SCAQMD thresholds, and impacts would be anticipated to be less than significant within 50 feet of a sensitive receptor. However, because the future locations and potential concentrations of construction emissions are unknown, and the Modified Project would implement infill development of residential units within residential areas, potential significant LST construction emissions could occur that may be significant and unavoidable, which is consistent with the findings of the 2017 SEIR.

6.1.2 Greenhouse Gas Emissions

Impact GHG-1, Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (Project-level and Cumulative).

As shown on Table 5.3-1, it is estimated that buildout would result in 201,303.0 $MTCO_2e$ construction emissions. When annualized over 30-years per SCAQMD methodology, annual emissions would be 6,710.0 $MTCO_2e$. However, as detailed in Section 5.1, *Air Quality*, and listed below, construction within the TLSP area is required to implement 2017 SEIR MM AQ-5, which requires the use of equipment meeting CARB Tier 4 emissions standards or higher for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities, which was not included in the modeling and would reduce total construction emissions.

As shown in Table 5.3-1, construction and operation of the new residential uses proposed in the TLSP Amendment would generate 115,031.4 $MTCO_2e$ per year ($MTCO_2e$/yr), an increase of approximately 35,133.7 $MTCO_2e$/yr over buildout of the existing TLSP. All of these emissions would exceed the SCAQMD threshold of 3,000 MT CO2e/yr.

Consistent with buildout of the existing TLSP, a majority of the GHG emissions generated from buildout and operation of the proposed TLSP Amendment are associated with mobile sources. The 2017 SEIR Mitigation Measures MM AQ-3 and MM AQ-4 would require TDM measures for future employment uses within the TLSP area, and MM AQ-5 would require use of Tier 4 construction equipment, which would lower GHG emissions from operation of the proposed uses included in the proposed TLSP Amendment. Mitigation Measure AQ-1: Vehicle Trip Reduction, Mitigation Measure AQ-2: Prohibition of Fireplaces, Mitigation Measure AQ-3: Electric Landscape Equipment, and Mitigation Measure AQ-4: Low VOC Paint (Operations) would reduce operational air quality emissions and would also reduce GHG emissions. However, even with incorporation of mitigation measures, impacts related to buildout of the proposed TLSP Amendment would be consistent with the impact conclusions set forth in the 2017 SEIR, which determined that impacts related to GHG emissions would be significant and unavoidable.

6.2 GROWTH INDUCEMENT

State CEQA Guidelines Section 15126.2(e), Growth Inducing Impact of the Proposed Project, requires that an EIR "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." The CEQA Guidelines also indicate that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. In general terms, a project may foster spatial, economic, or population growth in a geographic area, if it meets any one of the following criteria:

1. Directly or indirectly foster economic or population growth, or the construction of additional housing, in the surrounding environment;
2. Remove obstacles to population growth;
3. Require the construction of new or expanded facilities that could cause significant environmental effects; or
4. Encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

1. Does the Project directly or indirectly foster economic or population growth or the construction of additional housing?

Growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population in excess of what is assumed in master plans, land use plans, or in projections made by regional planning agencies.

As shown in Table 3-2, *Specific Plan Amendment Summary*, in Section 3, *Project Description*, of this DSEIR, the Approved Project allows for a maximum future development of 4,486 residential units and 3,248,890 square feet of nonresidential building space within the TLSP area. The proposed Modified Project proposes a maximum future development of 6,697 residential units and 3,248,890 square feet of nonresidential capacity within the TLSP area. The difference between these two scenarios would be an overall increase of 2,211 dwelling units. However, this analysis also considers the potential for implementation of 2,759 density bonus units. Buildout of the Modified Project with density bonus units would result in a total development capacity of 9,456 dwelling units within the TLSP area. The difference between the Approved Project and Modified Project with density bonus units would be 4,970 dwelling units.

Therefore, the Modified Project could facilitate future development of 9,456 dwelling units, a net increase of 4,970 dwelling units compared to the Approved Project. The DOF estimates that the City of Tustin had an average household size of 2.88 persons and a vacancy rate of 3.4 percent in 2023 (California Department of Finance, 2023). Thus, the average number of persons per housing unit in the City of Tustin in 2023 is estimated as the average household size (2.88 persons) times the occupancy rate (96.6 percent), or 2.78 persons. Using the persons-per-household estimate of 2.78, buildout of the Modified Project is estimated to result in approximately 13,817 additional residents compared to the Approved Project, which was estimated to generate 15,900 residents. Therefore, with addition of the Modified Project to the Approved Project, the total population of the TLSP buildout is estimated at 29,717 residents. As described in Table 5.6-2, *City and County Existing and Projected Population, 2019-2050,* the anticipated growth for the City of Tustin identified in the Southern California Council of Governments (SCAG) 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is 12,919 from 2019 to 2050.[1] The anticipated number of residents to result from the Modified Project, and further, buildout of the remaining TLSP area, far exceeds the growth identified in the SCAG 2024-2050 RTP/SCS.

Further, SCAG allocated the City of Tustin a total of 6,782 housing units to meet their Regional Housing Needs Allocation (RHNA) "fair share". Although both administered by SCAG, the differing intent and methodologies between the RTP/SCS growth projections and RHNA housing allocations cause inconsistency for future planning purposes. However, cities are legally required to plan for their RHNA "fair share" and rezone as necessary pursuant to Government Code Section 65583.2(h). Thus, the Project would contribute to the City's fair share of housing and, in part, satisfy the State requirements to provide new housing opportunities to increase housing supply across the state. Additionally, the Modified Project implements goals and policies of the Tustin Housing Element that support a variety of housing types and densities.

Further, as described in Section 5.6, *Population and Housing*, the City of Tustin is considered "jobs rich", with an existing jobs-housing ratio of 1.91. As shown in Table 5.6-8, *Project Area Jobs-Housing Ratio*, buildout of the Approved Project would result in a jobs-housing ratio of 2.76 for the TLSP area, while buildout of the Modified Project would result in a jobs-housing ratio (within the Project area) of 2.08. Thus, while both scenarios are considered jobs-rich, the Modified Project is richer in housing and closer to balanced conditions.

Overall, the Modified Project would indirectly foster population growth and the construction of new housing. However, the Modified Project would provide a regional beneficial effect of opportunity for diverse housing needs within the TLSP area, a jobs-rich area in a jobs-rich city, where employees can easily travel to nearby

[1]The 2050 population estimate was derived using the methodology presented in Section 4.5 of the SCAG Demographics & Growth Forecast which states an estimate of the future City-level population based on Connect SoCal's household forecast can be derived using a county-level Population:Housing ratio from TABLE 12 [of the SCAG document] and applying it to the City's future household growth (Southern California Association of Governments, 2024).

employment opportunities. The potential for 13,817 additional residents would exceed the SCAG population, housing, and employment growth projections for the City; however, the Modified Project would be implemented in compliance with SCAG's "fair share" housing allocation for the City and would help further the State's housing objectives. Therefore, impacts would be less than significant.

2. Does the Project remove obstacles to population growth?

Remove obstacles to growth through availability of public service infrastructure.

The elimination of a physical obstacle to growth is considered to be a growth inducing impact. A physical obstacle to growth typically involves the lack of public service infrastructure. The Modified Project would induce growth if it would provide public services or infrastructure with excess capacity, which would serve lands that would otherwise not be developable.

As described in Section 3.0, *Project Description*, roadways, and utilities would be required to support development of future residential construction within the Modified Project site. Future onsite infrastructure improvements that may be necessary for development within the Modified Project site include storm drains, wastewater, water, and dry utilities that would connect to existing facilities within the TLSP area or adjacent to the TLSP area. However, the Irvine Ranch Water District (IRWD) Sub-Area Master Plan (SAMP) for the TLSP area was updated by Michael Baker International on March 16, 2017, to analyze and reflect infrastructure needs of the Approved Project. The updated SAMP includes updates to the potable water, wastewater collection and non-potable water distribution, and sewer infrastructure analysis to reflect land uses and buildout assumptions included within the Approved Project (2017 TLSP). Under the Approved Project, the Modified Project, with potential density bonus units, would result in an overall net increase of 4,970 dwelling units compared to the Approved Project. Therefore, the previously adopted SAMP does not meet the full potential demand of residential capacity that would be allowed under the Modified Project. Further, the Modified Project could result in the need for additional infrastructure improvements beyond those identified in the 2017 SAMP. Therefore, Mitigation Measure UT-1 requires that once the development assumptions of the IRWD SAMP are surpassed, the SAMP for the TLSP shall be updated in partnership of the City and applicant prior to issuance of the grading permit.

Overall, infrastructure proposed under the Modified Project would not provide additional capacity beyond what was previously approved and what was previously planned for by the City. Because the anticipated infrastructure improvements would only enhance services to proposed developments and the Modified Project does not provide an extension of service to areas that are currently not served or were not previously planned for and would not provide excess capacity, the Modified Project would not result in significant growth inducing impacts.

Furthermore, future development allowed under the Modified Project could also implement circulation improvements, which are unknown at this time, such as pedestrian and bicycle facilities, which would enhance local circulation and use of transit. However, future circulation improvements would not extend circulation into a new area or provide excess circulation capacity that could induce growth. As a result, the circulation improvements would result in less than significant growth inducing impacts.

Remove obstacles to growth through changes in existing regulations pertaining to land development.

The Modified Project is an SPA to the TLSP to increase allowed capacity for the future development of residential units within Neighborhood D South, Neighborhood D North, and Neighborhood G, consistent with the approved HEU of the Tustin General Plan. Proposed additional capacity would include the housing units allocated the TLSP to accommodate the City's RHNA, buffer units included as part of the HEU, and density bonus units available to developers under the Surplus Land Act and State density bonus law. Density bonus is applicable to all undeveloped residential land uses within the TLSP area, including the newly added 6th

cycle RHNA units, as well as the remaining buildout capacity of the existing residential land uses within the TLSP area.

The TLSP SPA is proposed in consistency with the City's updated Housing Element, which was updated to include the City's RHNA "fair share" of housing units. Cities are legally required to plan for their RHNA "fair share" and rezone shortfall sites as necessary pursuant to Government Code Section 65583.2(h). Additionally, objective design standards (ODS) would be prepared to streamline future development that meets the intended use and design of the City for various residential areas throughout the city. Further, the Modified Project would ultimately increase the allowed residential capacity for the Modified Project site and ODS would remove existing development constraints related to subjective design preferences.

Conversely, SCAG policies concerning regional growth-inducement are included as part of Section 5.4, *Land Use and Planning*, and Section 5.6, *Population and Housing*. As described in those sections, the growth anticipated by SCAG's projections are inconsistent with the estimated future buildout of the proposed 9,456 residential units (including density bonus) and 3,248,890 square feet of nonresidential capacity within the TLSP area. However, the Modified Project would be implemented in compliance with SCAG's mandated "fair share" housing allocation for the City and would help further the State's housing objectives. Therefore, impacts related to growth from changes to existing regulations pertaining to land development would be less than significant.

3. Does the proposed Project require the construction of new or expanded facilities that could cause significant environmental effects?

Growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services that requires the construction of new public service facilities, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

The Modified Project is expected to incrementally increase the demand for fire protection and emergency response, police protection, school services, and recreational facilities and would not increase demand beyond that assumed for buildout of the City of Tustin. As described in Section 5.11, *Public Services*, the Modified Project would not require development of additional facilities or expansion of existing facilities to maintain existing levels of service of the Approved Project. Based on service ratios and build out projections, the Modified Project would not create a demand for services beyond the capacity of facilities considered under the Approved Project. Therefore, an indirect growth inducing impact as a result of expanded or new public facilities as a result of the Modified Project would not occur. The Modified Project would not have significant growth inducing consequences that would require the need to expand public services to maintain desired levels of service.

4. Does the Project encourage or facilitate other activities that could significantly affect the environment, either individually or cumulatively?

The Modified Project includes an SPA to amend the City's TLSP to establish that higher capacity of residential use would be allowed in the Modified Project site (Planning Areas [PAs] 8, 13-14, and 15) compared to the 2017 TLSP (Approved Project). In addition, ODS are proposed as part of the Modified Project and would apply to properties within the Modified Project site. The Modified Project would comply with all applicable City plans, policies, and ordinances as discussed in Section 5.4, *Land Use and Planning*. In addition, the analysis within this Draft SEIR prepared for the Modified Project analyzes impacts anticipated as a result of the construction and future operation at full potential buildout, including applicable density bonus. The TLSP area is completely surrounded by built-out urbanized area and the development of the TLSP would not facilitate additional development activities that could significantly impact the environment. Mitigation measures, both previously approved and newly proposed, have been identified within this SEIR to ensure

that the Modified Project minimizes potential future environmental impacts. Therefore, impacts would be less than significant.

6.3 SIGNIFICANT IRREVERSIBLE EFFECTS

State CEQA Guidelines require the EIR to consider whether "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely…. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified." (CEQA Guidelines Section 15126.2(d)). "Nonrenewable resource" refers to the physical features of the natural environment, such as land, waterways, mineral resources, etc. These irreversible environmental changes may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed irretrievable commitments of nonrenewable resources is not justified (e.g., the project involves the wasteful use of energy).

The Modified Project would result in or contribute to the following irreversible environmental changes:

- Lands in the Modified Project site that are currently planned for future development under the existing TLSP (Approved Project) would be committed to allowance of increased residential capacity once the SPA is implemented. Secondary effects associated with this irreversible commitment of land resources include:
    - Increased vehicle trips on surrounding roadways during operation of future projects under the proposed Project (see Section 5.9, *Transportation*).
    - Emissions of air pollutants and greenhouse gases associated with construction and operation of future projects under the proposed Project (see Section 5.1, *Air Quality,* and Section 5.3, *Greenhouse Gas*).
    - Consumption of non-renewable energy associated with construction and operation of future projects under the Modified Project due to the use of automobiles, lighting, heating and cooling systems, appliances, construction materials, and the like (see Section 5.3, *Energy*).
    - Increased ambient noise associated with an increase in activities and traffic from future projects under the Modified Project (see Section 5.9, *Noise*).

In regard to energy usage from development of future projects under the Modified Project, as demonstrated in the analyses contained in Section 5.3, *Energy*, the Modified Project would not involve wasteful or unjustifiable use of non-renewable resources, and conservation efforts would be enforced during construction and operation of future proposed development, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Development of future projects under the Modified Project would incorporate energy-generating and conserving measures, including those required by the California Building Code, California Energy Code Title 24, which specify green building standards for new developments. Project-specific information related to energy consumption is provided in Section 5.2, *Energy*, of this Draft SEIR.

6.4 REFERENCES

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7. Effects Found Not Significant

CEQA Guidelines Section 15126.2(a) states that "[a]n EIR shall identify and focus on the significant effects on the environment." During the preparation of this SEIR, the Project was determined to have no potential to result in significant impacts under ten environmental issue areas: aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, recreation, and wildfire. Therefore, these issue areas were not required to be analyzed in detail in Section 5, *Environmental Impact Analysis*, of this Draft SEIR.

CEQA Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible effects of a project were determined not to be significant and were therefore not discussed in detail in the SEIR. As allowed by CEQA Guidelines Section 15128, statements related to the above listed topic areas are presented below.

7.1 AESTHETICS

Scenic Vista

The change in land use mix and associated building types would alter the visual appearance of the Project site but would not result in a change or effect on a scenic vista. The proposed Project is an amendment to the TLSP, which would amend PAs 8, 13, 14 and 15 of the TLSP to accommodate a total of 4,466 additional units within Neighborhoods D South, D North, and G. The intensification in residential density of the area could slightly alter the visual appearance of the Project site but would not result in a change in effect on a scenic vista. No new significant impacts would occur.

Scenic Resources within State Scenic Highway

The Project site is not within the vicinity of a designated State scenic highway. The nearest designated State scenic highway to the site is State Route 91 (SR-91), about 8.5 miles to the north (California Department of Transportation, 2018). Implementation of the Specific Plan Amendment would not impact scenic resources in a State scenic highway.

Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality

The intensification in residential density of the area could slightly alter the visual appearance of the Project site. However, future development would follow existing development standards and development standards and design guidelines, including building height requirements, setbacks, and signage that represent the change in land uses, while maintaining or enhancing the character of the TLSP area. Additionally, the SPA would be required to comply with Mitigation Measure Vis-1 from the certified FEIR/EIS, which requires an urban design plan to provide for distinct and cohesive architectural and landscape design as well as harmony with adjacent landscaping. The urban design plan required under Mitigation Measure Vis-1 would require updating in response to modifications to the land use plan proposed in the TLSP Amendment. Therefore, the Project would not result in impacts related to a conflict with applicable zoning or other regulations governing scenic quality.

Light and Glare

The intensification in residential density of the area could slightly alter the visual appearance of the Project site. However, consistent with the conclusions in the FEIR/EIS, residential lighting would be similar to light sources associated with the existing commercial, industrial, and residential uses adjacent to the Project site. Additionally, lighting added onsite by implementation of the Specific Plan Amendment would only be visible

from close range due to the flat topography of the site and structures on and surrounding the site. No new significant lighting impacts would occur.

2017 SEIR Mitigation Measures Applicable to the Proposed Project (Amended 2022)

MM Vis-1 An urban design plan shall be adopted to provide for distinct and cohesive architectural and landscape design, features, and treatments, and harmony with existing adjacent landscape.

7.2 AGRICULTURE AND FORESTRY RESOURCES

Although the prior environmental findings identified farmland within the Specific Plan area, there are currently no farmland or agricultural activities on the Project site. No Prime Farmland, Farmland of Statewide Importance, or Unique Farmland is mapped within the Project site on the California Important Farmland Finder maintained by the Division of Land Resource Protection (California Department of Conservation, 2018). Therefore, the Project would not convert mapped important farmland to nonagricultural uses, and no impact would occur.

As noted above, the Project site is not zoned for agricultural use and there are currently no agricultural uses within the Project site. Additionally, as noted in the 2017 SEIR, there are no Williamson Act contracts in effect on the proposed Project site. Therefore, no impact related to existing zoning for agricultural use, or a Williamson Act contract would occur.

Land within the Project site is not designated for forest land, timberland, or timberland production on the Project site. Therefore, no impact related to conflict with existing zoning for forest land, timberland, or timberland production would occur.

7.3 BIOLOGICAL RESOURCES

Special Status Species

Although the proposed Project would allow for intensification of density, the Project would not change the overall development footprint of the TLSP. Implementation of the Project would not cause impacts to biological resources that were not previously analyzed in the 2017 SEIR. As stated, the California Department of Fish and Wildlife (CDFW) approved a pond turtle relocation and mitigation plan for the Approved Project, and all turtles have been relocated. Mitigation Measures Bio-2, Bio-3, and Bio-4 would also be applicable to the Modified Project. Implementation of the Project would not result in new impacts to any special status species or their habitats, and mitigation measures would reduce impacts to less than significant. The Project would allow the development of future housing by-right on various parcels within the Project site if certain conditions are met, and therefore, additional CEQA documentation would not need to be conducted. Therefore, Mitigation Measure Bio-5 has been included to require updated surveys at the time of future development to confirm site conditions are consistent with previous findings and additional impacts would not occur as a result of the project. Therefore, the Project would not result in a new impact related to special status wildlife or plant species.

Riparian Habitat and Sensitive Natural Communities

The jurisdictional delineation conducted for the FEIR/EIS identified Waters of the US and wetlands protected under the federal Clean Water Act within the TLSP area. However, the jurisdictional delineation did not identify Waters of the State or riparian habitats jurisdictional to CDFW within the TLSP area. The 2006 Addendum identified 0.8 acres of riparian habitat. The development area for the TLSP Amendment would

be the same as the Project area analyzed in the Approved Project. No new areas would be developed. With implementation of MM Bio-1, impacts to areas under the jurisdiction of CDFW and Waters of the US would be reduced to a less than significant impact. Future developers would be required to obtain permits from CDFW, the Regional Water Quality Control Board (RWQCB), and the US Army Corps of Engineers (Corps). This would not result in a significant change in impact conclusions of the 2017 SEIR. No sensitive natural communities have been identified onsite in previous environmental documentation and no new sensitive natural communities have been identified through a biological record search. Therefore, the proposed Project would not result in a new impact related to riparian habitat or sensitive natural communities.

Wetlands

As described above, the development area for the TLSP Amendment would be the same as the Project area analyzed in the FEIR/EIS. No new areas would be developed. According to the 2022 Annual Mitigation Monitoring Report, the City has 401, 404, and 1602 permits which apply to the Project area (MM Bio-1). These permits and responsibilities would be assigned to subsequent developers as applications are submitted. With implementation of MM Bio-1, impacts to areas under the jurisdiction of CDFW and Waters of the US would be reduced to a less than significant impact. Future developers would be required to obtain permits from CDFW, RWQCB, and the Corps. This would not result in a significant change in impact conclusions of the 2017 SEIR. Therefore, the Project would not result in a new impact related to State or federally protected wetlands.

Wildlife Movement Corridors and Nursery Sites

Existing vegetation onsite currently consists of landscaping in developed areas, nonnative grassland, and previously graded areas on vacant land. Previous environmental document prepared determined that the Project area does not support wildlife movement or a wildlife corridor due to surrounding development and lack of available habitat. Therefore, implementation of the Project would not interfere with wildlife movement, and no new significant impact would occur.

Local Policies or Ordinances Protecting Biological Resources

As determined by the FEIR/EIS, there are no local policies protecting biological resources impacted by implementation of the Project. In 2018, the City of Tustin updated their General Plan. As shown in Table 7-1, *Consistency with 2018 General Plan Policies for Biological Resources*, the Project would be consistent with the goals and policies identified in the updated General Plan. No impact would occur.

Table 7-1: Consistency with 2018 General Plan Policies for Biological Resources

2018 City of Tustin General Plan Policy	Project Consistency with General Plan Policy
GOAL 5 Protect water quality and conserve water supply.	
Policy 5.1 Local drainage courses, channels, and creeks should be improved to protect vegetation and wildlife habitat wherever possible.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. The FEIR/EIS identified several potential jurisdictional waters onsite, including but not limited to ditches and drainages, the Santa Ana/Santa Fe Channel, the Barranca Channel, and Peters Canyon Channel. According to Section 5.4, *Biological Resources*, of the Initial Study (Appendix A), future developments would require necessary State and federal permits to be provided to the City prior to the issuance of mass or grading permits for grading activities impacting jurisdictional water areas. This would also require development projects to create (establish), restore, or

2018 City of Tustin General Plan Policy	Project Consistency with General Plan Policy
	enhance wetland/riparian habitats on-site to the maximum extent practicable.
Policy 5.2 Protect groundwater resources from depletion and sources of pollution.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described in Section 5.10 *Hydrology and Water Quality,* of the Initial Study (Appendix A), future developments would protect water quality and groundwater recharge through the requirement of a project specific SWPPP and a WQMP.
Policy 5.3 Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Development of the TLSP would require development of individual projects to comply with the CALGreen Building Code and would therefore implement sustainable water conserving practices.
Policy 5.4 Support the expansion of reclaimed water production and use wherever possible and economically feasible.	The TLSP SPA would not prevent the implementation of this measure as it would not prevent or conflict with any plans for the expansion of water reclamation facilities.
Policy 5.5 Protect water quality by responsible agency support of enforcement of water quality standards for water imported into the County, and to preserve the quality of water in the groundwater basin and streams.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Water quality would be analyzed on a project-specific basis and protected through the requirement of a SWPPP and WQMP.
Policy 5.6 Coordinate water quality and supply programs with all responsible water agencies, and cooperate and participate in plan preparation and programs.	The TLSP SPA would not prevent the implementation of this measure and future projects would coordinate with all applicable responsible water agencies. Additionally, a Water Supply Assessment was be prepared for TLSP SPA and has been analyzed within Section 5.10, *Utilities*, of this Draft SEIR.
Policy 5.7 Reduce and eliminate contamination of water supply from industrial operations.	Not applicable. The TLSP SPA does not propose any industrial operations and therefore would not prevent the implementation of this measure.
GOAL 6 Identify, designate, and preserve significant or unique riparian habitats.	
Policy 6.1 Encourage the County of Orange to restore riparian habitat above the Lower Peters Canyon Retarding Basin to be used as off-site mitigation for biologic impacts associated with projects located inside or outside the Planning Area.	Not applicable. The TLSP SPA would not prevent the implementation of the Lower Peters Canyon Retarding Basin as an off-site mitigation area for biological impacts as the TLSP area is not located near the Lower Peters Canyon Retarding Basin.
GOAL 7 Conserve and protect natural plant and animal communities.	
Policy 7.1 Inventory unique or significant tree stands, with particular attention given to the cedar stand, eucalyptus groves, and eucalyptus windrows in East Tustin. Develop standards to retain or incorporate the eucalyptus windrows and groves into development plans where feasible. The redwood/sequoia stand has been retained within a park site and integrated into the park design.	Not applicable. The TLSP SPA site has been previously graded, and no significant tree stands currently exist on the site.
Policy 7.2 Conserve important plant communities and wildlife habitats, such as riparian areas, wildlife movement corridors, wetlands, and significant tree stands through the practice of creative site planning, revegetation, and open space easements/dedications.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described in Section 5.4, *Biological Resources*, of the Initial Study (Appendix A), thresholds (a) and (b), The TLSP SPA site has been developed and the entire Project area has been graded.

2018 City of Tustin General Plan Policy	Project Consistency with General Plan Policy
	No sensitive natural communities have been identified onsite in previous environmental documentation and no new sensitive natural communities have been identified through biological record search. Additionally, future developers would analyze biological resources and would be required to obtain permits from CDFW, the Regional Water Quality Control Board (RWQCB), and the US Army Corps of Engineers (Corps).
Policy 7.3 Require development proposals in areas expected to contain important plant and animal communities to include biological assessments.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described above, future developers would analyze biological resources and would be required to obtain permits from CDFW, the Regional Water Quality Control Board (RWQCB), and the US Army Corps of Engineers (Corps).
Policy 7.4 Require new development to revegetate graded areas.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis.
Policy 7.5 Where feasible and consistent with flood control requirements, the treatment of Peters Canyon Wash should retain a natural appearance by minimizing concrete channelization, retaining or replanting indigenous vegetation and/or retaining open space areas along the drainage course.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Peters Canyon Channel extends through the eastern part of the TLSP SPA area; however, future developments would be required to implement applicable flood control requirements.
Policy 7.6 Incorporate planting in new development areas in East Tustin to be compatible with the character and quality of the natural surrounding environment.	Not applicable. The TLSP SPA is not located within the East Tustin area. Therefore, the policy does not apply to the proposed Project.
GOAL 8 Conserve and protect significant topographical features, important watershed areas, resources, and soils.	
Policy 8.1 Develop standards to preserve the unique variety of land forms indigenous in hillside areas, and ensure that the development process is structured to ensure that grading and siting practice reflects the natural topography	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. The TLSP SPA is not located within a hillside area and would be consistent with development standards for the site, as ensured during plan check for individual projects.
Policy 8.2 Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Individual development projects within the TLSP SPA area would require a SWPPP and WQMP that would include BMPs for erosion control.
Policy 8.3 Encourage the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Individual development projects within the TLSP SPA area would require a SWPPP and WQMP that would include BMPs for proper soil management.
Policy 8.4 Place restrictions upon and apply standards to the development of floodplain areas, ecologically sensitive areas and potentially hazardous areas.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. The Project site is not within a floodplain area and as described in Section 5.4, *Biological Resources*, of the Initial Study (Appendix A), threshold (c), the City has 401, 404, and 1602 permits which apply to the Project area. These permits and responsibilities would be assigned to subsequent

2018 City of Tustin General Plan Policy	Project Consistency with General Plan Policy
	developers as applications are submitted. With implementation of MM Bio-1, impacts to areas under the jurisdiction of CDFW and Waters of the US would be reduced to a less than significant impact. Additionally, according to Section 5.9, *Hazards and Hazardous Materials*, of the Initial Study (Appendix A), the TLSP SPA is not located within a potentially hazardous area and future developments within the TLSP would be subject to existing regulations. Also, as stated in threshold (b) above, no sensitive natural communities have been identified onsite in previous environmental documentation and no new sensitive natural communities have been identified through biological record search.
Policy 8.5 Review applications for building and grading permits, and applications for subdivision for adjacency to, threats from, and impacts on geological hazards arising from seismic events, landslides, or other geologic hazards such as expansive soils and subsidence areas.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Future developments under the TLSP SPA would be subject to design and development standards that are already included in TLSP and require a Geotechnical Investigation to identify risks due to geologic hazards.
Policy 8.6 Site planning and architectural design shall respond to the natural landform whenever possible to minimize grading and viewshed intrusion.	The TLSP SPA would not prevent the implementation of this measure. Future development projects under the TLSP SPA would follow design standards that are already included in the TLSP. Additionally, as stated in Section 5.1, *Aesthetics*, of the Initial Study (Appendix A), the intensification in residential density of the area could slightly alter the visual appearance of the Project site but would not result in a change in effect on a scenic vista or natural landform. Additionally, the SPA would be required to comply with Mitigation Measure Vis-1 from the FEIR/EIS requiring an urban design plan to provide for distinct and cohesive architectural and landscape design as well as harmony with adjacent landscaping.
Policy 8.7 Consider public acquisition of significant land resources for open space when funds are available.	Not applicable. The TLSP SPA area is not considered a significant land resource that requires consideration of public acquisition.
Policy 8.8 Require geotechnical studies for developments that are proposed for steep slopes and where geological instability may be suspected. Where a precise location of the El Modena fault is determined, appropriate building setbacks shall be established per State law.	Not applicable. The TLSP SPA area does not include steep slopes and is not located by the El Modena fault, as described in Section 5.7, *Geology and Soils*, of the Initial Study (Appendix A).
Policy 8.9 Significant natural features shall be preserved and incorporated into proposed development projects.	Not applicable. There are no natural features within the TLSP SPA area, except for riparian areas as described in Section 5.4, *Biological Resources,* of the Initial Study (Appendix A),.
Policy 8.10 Mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, and sensitive habitats through the environmental review process.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described above, the TLSP SPA area is not characterized as having steep slopes. Additionally, as described in Section 5.4, *Biological Resources*, of the Initial Study (Appendix A), thresholds (b) and (c), the City has 401, 404, and 1602 permits which apply to the Project area. These permits and responsibilities would be assigned to subsequent

2018 City of Tustin General Plan Policy	Project Consistency with General Plan Policy
	developers as applications are submitted. With implementation of MM Bio-1, impacts to areas under the jurisdiction of CDFW and Waters of the US would be reduced to a less-than-significant impact. Future developers would also be required to obtain permits from CDFW, RWQCB, and the Corps. Furthermore, as described in Section 5.5, *Cultural Resources*, of the Initial Study (Appendix A), the changes to land uses proposed as part of the Project would not result in any new impacts to historic or archeological resources with implementation of MM Arch-2, which would be required by individual development projects as part of the TLSP.
Policy 8.11 Encourage retention of permanent open space through dedication as a part of the development review/subdivision process.	Not applicable. The TLSP SPA is not subject to this General Plan policy.
Policy 8.12 Concentrate higher intensity uses in areas containing less sensitive landforms and preserve the most sensitive landform resources as open space.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. No sensitive landforms are located in the TLSP SPA area and therefore is not subject to preservation.
Policy 8.13 Non-developable or constrained areas should be evaluated for possible use as open space or recreational use.	Not applicable. As described in the 2021-2029 Housing Element Update, identified housing sites have been evaluated and were determined to be developable.
Policy 8.14 Design an integrated open space system in the City that includes landscaped medians and parkways in City streets, the City's park system, bicycle and pedestrian trail systems, and active and passive open space with consideration given to developing guidelines to integrate the system with private open space.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis.
Policy 8.15 Preserve the open space value of the central Peters Canyon ridge by excluding buildings and overhead utility lines from being developed on top and careful siting and landscaping of structures adjacent to the ridgeline.	Not applicable. The TLSP SPA area is not located within the Peters Canyon ridge and is therefore future development implemented under the TLSP SPA would not conflict with this policy.
Policy 8.16 Site buildings and align roadways to maximize public visual exposure to natural features.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described in Section 5.1, *Aesthetics*, of the Initial Study (Appendix A), future development would follow existing development standards and design guidelines, including building height requirements, setbacks, and signage that represent the change in land uses while maintaining or enhancing the character of the TLSP area. The proposed TLSP SPA would not significantly alter allowable heights in the Project site such that it would degrade the quality or character of the site, including natural features.
Policy 8.17 Maintain the natural profile and landform character of the "knoll" park site in East Tustin.	Not applicable. The TLSP SPA is not located in the East Tustin area and therefore does not affect the “knoll” park site.

Conflict with Habitat Conservation Plan

The Project area is within the plan area of the Orange County Central-Coastal Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP); however, the site is not within a reserve

established under the NCCP/HCP. In 2019, the NCC revised the habitat restoration and enhancement plan for the Central and Coastal Subregion. The plan identifies and prioritizes potential restoration areas within the reserve and provides detailed information on the most effective methods of associated costs of restoration activities.

In 2006, Orange County voters approved the renewal of Measure M, effectively extending the half cent sales tax to provide funding for transportation projects and programs in the county. As part of the renewed Measure M (or Measure M2), a portion of the M2 freeway program revenues were set aside for the M2 Environmental Mitigation Program (EMP) to provide funding for programmatic mitigation to offset impacts from the freeway projects in the 13 freeway segments covered by Measure M2. The Orange County Transportation Authority (OCTA) prepared a Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) as a mechanism to offset potential project-related effects on threatened and endangered species and their habitats in a comprehensive manner. The NCCP/HCP achieves higher-value conservation than what would be expected through project-by-project mitigation in exchange for a streamlined project review and permitting process for the Measure M2 freeway program as a whole.

The NCCP/HCP was finalized in spring 2017 (Orange County Transportation Authority, 2016), and covers 13 listed and non-listed species including: plants: intermediate mariposa lily, many-stemmed dudleya, and southern tarplant; fish: arroyo chub; reptiles: coast horned lizard, orangethroat whiptail, and western pond turtle; birds: cactus wren, coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher; and mammals: bobcat and mountain lion. The OCTA NCCP/HCP is applicable to the areas acquired for conservation purposes, as well as any projects that would occur within OCTA right-of-way. The Project would not directly impact OCTA right-of-way, and future improvements made as a result of individual development projects would be required to conduct a project-specific analysis of consistency with the OCTA NCCP/HCP since potential impacts are too speculative to analyze within this programmatic analysis. Therefore, no impact would occur and no change from the previous analysis is required.

2017 SEIR Mitigation Measures Applicable to the Proposed Project (Amended 2022)

MM Bio-1 The project proponents of any development affecting jurisdictional waters of the U.S. or vegetated wetlands shall obtain Section 401, Section 404, Section 1602, and other certifications, approvals and permits as necessary. Copies of the necessary state and federal permits shall be provided to the City prior to the issuance of mass or grading permits for grading activities impacting jurisdictional areas. A replacement ratio for affected wetland resources shall be determined in consultation with regulatory agencies as part of the permitting process and shall be no less than 1:1 replacement of function and value. Additional criteria and requirements will be as follows:

- Create (establish), restore, or enhance wetland/riparian habitats on-site to the maximum extent practicable to minimize and replace the on-site loss of USACE and CDFG jurisdictional acreage and function, or off-site as may be permitted by the USACE and CDFG.
- To return jurisdictional habitats that are temporarily disturbed during construction to pre-construction conditions.

To provide for maintenance, management and monitoring of the mitigation site or sites for a minimum of three years as determined through the permitting process.

MM Bio-2 Based on consultations with CDFG, City of Tustin, or a project proponent as applicable, an off-site relocation site for southwestern pond turtles captured on site shall be identified that is as close to the Reuse Plan area as possible and that is sustainable in perpetuity. (No appropriate habitat in the City of Tustin is available for relocation.) Potential relocation

sites include but are not limited to a turtle pond and relocation site located in upper Shady Canyon within the Orange County Nature Preserve; or the San Joaquin Marsh, which is managed by UC Irvine, Irvine Ranch, and the Orange County Water District. Some property owners and public agencies may be adverse to the relocation of species of special concern onto their property or jurisdiction, and it would be speculative to identify actual sites prior to completion of consultation with CDFG and with potential property owners and/or appropriate public agencies. A relocation and mitigation plan shall be prepared by a qualified biologist for approval by the CDFG. The relocation and mitigation plan shall include the following:

- Requirement for focused surveys for southwestern pond turtles prior to construction activities and submittal of survey report to the CDFG.
- Identification of specific relocation site within the Newport Bay watershed.
- Methodology for trapping, capture, recordation and release of southwestern pond turtles.
- Requirement of biological monitoring during construction and requirement for capture and relocation by a qualified biologist of any additional southwestern pond turtles observed during construction.

MM Bio-3 Permits from the CDFG shall be obtained for live-capture of the turtles and for transporting them to the relocation site.

MM Bio-4 A project proponent shall negotiate with the CDFW or other agency for organization as appropriate, for relocation of turtles and/or contribution of funds to improve, restore, or create a relocation site as turtle habitat, in conjunction with any regulatory permits necessary.

MM Bio-5 Biological surveys shall be conducted by a qualified biologist to determine the potential for special status species within the project site for all future projects at the time that development is proposed. The project-level biological survey report shall analyze these projects' impacts on sensitive animal species and shall propose mitigation to reduce project impacts to a less than significant level.

7.4 CULTURAL RESOURCES

Historic Resources

As described in Initial Study prepared for the Project (Appendix A), a cultural resources records search was completed for the Project site by BFSA at the South Central Coastal Information Center (SCCIC) on August 22, 2023, and encompassed the Project site and a 500-foot buffer surrounding the Project site (BFSA Environmental Services, 2023). Based upon the records search results, five resources have been previously recorded within the Project site. The resources identified within the Project site include three prehistoric resources, one historic resource, and one multicomponent resource.

The prehistoric resources identified within the Project site as part of the records search included two prehistoric isolate artifacts that include a stone bowl fragment (P-30-010019) and a granitic pestle (P-30-100201). In addition, one prehistoric limited habitation site (P-30-001652) was also previously recorded within the Project site. These resources have been previously evaluated as not eligible to the California Register of Historic Resources (CRHR). The records search also identified a multicomponent site (P-30-001760) which is primarily historic in composition consisting of historic glass bottles of varying types,

ceramics, flatware, and one prehistoric mano discovered during cultural resource monitoring for the Tustin Phase I Legacy Project. The site was determined as not eligible for the CRHR.

The historic resources previously included two former United States Marine Corp World War II era blimp hangars (P-30-160312). These resources were previously evaluated as both CRHR eligible resources and National Register of Historic Places (NRHP) eligible resources, and one of the two original hangars remains extant. Unfortunately, on November 7, 2023, a fire caused severe damage to Hangar 28, resulting in a total loss of the structure. As of the preparation of this SEIR, the demolition of the structure is underway, and the remains of the hangar will eventually be removed by the US Navy. Plans for the hangar's removal have not been finalized. Hangar 29 remains in place. It is currently vacant, although occasionally leased by the City of Tustin for special events and unique activities, such as filming commercials.

The changes to land uses proposed as part of the Project would not result in any new impacts to historic resources. Mitigation measures required prior to demolition of the hangars have been implemented (MM Hist-3 and MM Hist-4). Additionally, no new historic resources were identified as part of the Project record search that would result in changed Project site conditions or new or more severe impacts. The land use changes proposed would not result in new impacts or result in changes to the prior environmental findings. Therefore, the Project would not result in a new significant impact related to historic resources.

Archaeological Resources

Archaeological resources are prehistoric or historic evidence of past human activities, including structural ruins and buried resources. As described above, as part of the Project cultural record search, five resources were identified within the Project site (Appendix A). Of the five resources, the only two resources determined to be eligible for the CRHR were the two former United States Marine Corp World War II era blimp hangars (P-30-160312). The other resources were previously evaluated and determined to be ineligible for listing on the CRHR.

As concluded in the FEIR/EIS, archaeological resources could be buried in site soils affiliated with the historic uses of the site and could be damaged by ground-disturbing activities implemented under the TLSP. Although the site has been graded, development may require grading to an increased depth. The development footprint for the Project is within the impact area evaluated in the 2017 SEIR. The Project would be required to comply with FEIR/EIS mitigation measures to reduce impacts to less than significant (MM Arch-2). Therefore, the proposed Project would not result in a substantial change from the archaeological resources impacts identified in the 2017 SEIR. No new impact would occur.

Human Remains

California Health and Safety Code Section 7050.5 requires that in the event that human remains are discovered within the Project area, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. The project would comply with existing law, and potential impacts to human remains would be less than significant. Furthermore, the development footprint is within the impact area evaluated in the 2017 SEIR and no new impacts would occur.

2017 SEIR Mitigation Measures Applicable to the Proposed Project

MM Arch-2 Prior to issuance of grading permits the cities of Tustin and Irvine shall each require applicants of individual development projects to retain as appropriate a county-certified archaeologist. If buried resources are found during grading within the reuse plan area a qualified archaeologist would need to assess the site significance and perform the appropriate mitigation. The Native American viewpoint shall be considered during this process. This could include testing or data recovery Native American consultation shall also be initiated during this process.

MM Hist-3 As specified in the MOA a substantive effort will be made to determine whether there is an economically viable adaptive use of Hangar 28 and Hangar 29.

MM Hist-4 If the marketing effort identifies an economically viable adaptive use of either of the complexes that complex will be encumbered by a historic preservation covenant. In the case of the Hangar 28 complex these measures shall balance the needs of the adaptive use and the needs for effective operation of the Federal Lands to Parks or Historic Monument programs.

7.5 GEOLOGY AND SOILS

Fault Rupture and Ground Shaking

No active faults have been identified on or next to the site. The FEIR/EIS identified 10 active faults ranging from 10 miles to 48 miles from the Project area and estimated these faults to be capable of generating earthquakes ranging from magnitude 6.5 to 7.8. The FEIR/EIS determined impacts related to surface rupture of a fault, strong ground shaking, ground failure including liquefaction, tsunamis and seiches, and flooding due to dam failure after an earthquake were all identified as less than significant.

The Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the FEIR/EIS, subsequent amendments, and 2017 SEIR. Since certification of the 2017 SEIR, several updates to the California Building Code (CBC) have occurred and the 2022 CBC has been adopted and will be the applicable standard for development moving forward. All geotechnical investigations and building specifications associated with potential future projects would be conducted in compliance with the most current applicable set of CBC standards. Verification of compliance with applicable standards would be confirmed during plan check on a project-by-project basis. No changes in circumstances have occurred since 2017 SEIR adoption. Therefore, the Project would result in no new impacts.

Liquefaction

The Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. Latest California Geological Survey (CGS) data shows that the Project site remains an area classified as a liquefaction hazard (California Geological Survey, 2020). The FEIR/EIS identified engineering techniques that would reduce hazards associated with liquefaction to less than significant, including: (1) excavation and removal or recompaction of potentially liquefiable soils; (2) in-site ground densification; (3) other types of ground improvement; (4) deep foundations that have been designed to accommodate liquefaction effects; (5) reinforced shallow foundations; and (6) design of the proposed structures or facilities to withstand predicted ground softening and/or predicted vertical and later ground displacements to an acceptable level of risk. In addition, geotechnical investigations for projects onsite are required to evaluate the potential for liquefaction on the affected Project area and provide measures to minimize hazards arising from

liquefaction. The Project would not result in any substantial changes to the environmental impacts previously evaluated in the FEIR/EIS. Compliance with required geotechnical investigations and engineering techniques would result in less-than-significant impacts and no new substantial impact would occur.

Landslides

The Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR and determined to be less than significant. Existing Project site conditions are consistent with conditions analyzed within the 2017 SEIR, and no further changes to circumstances have been made. Therefore, the Project site is not at risk of landslide and no new impacts would occur.

Soil Erosion

The Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. The 2017 SEIR determined that with implementation of a Stormwater Pollution Prevention Plan (SWPPP), construction impacts would be less than significant on erosion and loss of topsoil. The Project would introduce the opportunity for additional development within the TLSP footprint, which could increase the intensity and duration of construction. However, SWPPPs would be developed and implemented on a project-by-project basis. The City would review SWPPPs prior to approval of the grading permit and would ensure soil erosion impacts would not occur as a result of project construction. Following construction, site soils would be stabilized by development and impacts would be less than significant. Therefore, no new impacts would occur.

Result in on- or Offsite Landslide, Lateral Spreading, Subsidence, Liquefaction or Collapse

The Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EISFEIR/EIS, subsequent amendments, and 2017 SEIR and impacts were determined to be less than significant.

Expansive Soils

The Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. The Project site is susceptible to liquefaction, as identified above (California Geological Survey, 2020). The site may be susceptible to lateral spreading due to the high potential for liquefaction onsite. Consistent with the findings of the FEIR/EIS, all grading operations and construction would be conducted in conformance with the City of Tustin Grading Manual and most recent version of the CBC. Further, geotechnical investigations for projects developed pursuant to the TLSP would be required to identify engineering controls to eliminate any potential for lateral spreading. No new significant impacts would occur.

Compressible soils susceptible to some consolidation were identified in the FEIR/EIS as likely over the entire Project area, especially east of Peters Canyon Channel. However, each project conducted under the proposed TLSP would be required to be consistent with the most recent CBC and incorporate engineering techniques for removal of soils unsuitable for supporting proposed structures and replacement with engineered fill soils capable of supporting such structures. Therefore, no new significant impact would occur.

The 2017 SEIR Initial Study stated that subsidence resulting from groundwater withdrawal has not been reported in the region (PlaceWorks, 2015, p. 52). However, the greater Los Angeles metropolitan area experiences surface deformation due to a variety of natural and human-induced causes (U.S. Geological Survey, 2001). Each project conducted under the proposed TLSP would be required to be consistent with the most recent CBC and incorporate engineering techniques for removal of soils unsuitable for supporting proposed

structures and replacement with engineered fill soils capable of supporting such structures. Subsidence risk and geotechnical requirements would be determined on a project-specific basis. Therefore, no new impacts would occur.

Alternative Waste Disposal Systems

Buildout of the TLSP would include construction of sewer mains and sewer laterals. Septic tanks are not proposed as part of the Project. No impact would occur.

Paleontological Resources

The Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. Paleontological resources are fossils, which are the recognizable remains or evidence of past life on earth; including bones, shells, leaves, tracks, burrows, and impressions. The ground disturbance footprint of the TLSP would be the same as that analyzed in the FEIR/EIS, subsequent environmental documents, and the 2017 SEIR. The Project would be required to comply with FEIR/EIS mitigation measures to reduce impacts to less than significant (MM Paleo-1 and Paleo-2). Therefore, with implementation of mitigation measures, the proposed project would not result in a substantial change from paleontological resources impacts identified in the FEIR/EIS. No new impact would occur.

2017 SEIR Mitigation Measures Applicable to the Proposed Project

MM Paleo-1 The cities of Tustin and Irvine shall each require applicants of individual development projects to comply with the requirements established in a Paleontological Resources Management Plan (PRMP) prepared for the site, which details the methods to be used for surveillance of construction grading, assessing finds, and actions to be taken in the event that unique paleontological resources are discovered during construction.

MM Paleo-2 Prior to the issuance of a grading permit, project applicants shall provide written evidence to each city that a county-certified paleontologist has been retained to conduct salvage excavation of unique paleontological resources if they are found.

7.6 HAZARDS AND HAZARDOUS MATERIALS

Routine Transport, Use, or Disposal of Hazardous Materials

Hazards to the public or the environment arising from routine transport, use, or disposal of hazardous materials were identified as less than significant after regulatory compliance in the certified FEIR/EIS and 2017 SEIR. Buildout of the Project would use similar types and amounts of hazardous materials as implementation of the approved TLSP. The use, transport, and disposal of hazardous materials would be required to comply with existing regulations of several agencies, including the Department of Toxic Substances Control (DTSC), the Environmental Protection Agency (EPA), California Division of Occupational Safety and Health, Orange County Environmental Health, and the Orange County Fire Authority. Therefore, no new significant impact would occur.

Release of Hazardous Materials into the Environment

The Project consists of the same development area analyzed in the certified FEIR/EIS and 2017 SEIR. However, as part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes which would allow for an increased residential unit capacity.

Buildout of the Project would use similar types and amounts of hazardous materials as implementation of the approved TLSP. The operation of proposed residential uses would not require the use of significant amounts of hazardous materials, in that residential activities are limited to the use of hazardous materials such as solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these hazardous materials products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the Project. Additionally, the introduction of residential land uses to Neighborhood D North, which was previously planned for nonresidential uses, would not result in new impacts. Neighborhood D North is planned for the future development of commercial, office, and institutional land uses. These land uses do not require the use of hazardous materials and would not pose a risk to surrounding future residential uses. The TLSP area as a whole does not permit industrial land uses that would require more intensive use of various hazardous materials.

Compliance with regulatory requirements would reduce hazards to the public and the environment from accidental release of hazardous materials. The on-going clean-up and remediation of hazardous materials contamination within the TLSP area would not result in a significant hazard to the public. Remediation is required to implement several measures to ensure safe standards and manage or isolate potentially hazardous substances. This activity occurs under the oversight of the (Department of Toxic Substances Control (DTSC) in coordination with the Regional Water Quality Control Board (RWQCB). Therefore, no new substantial impact would occur.

Hazardous Substances Within One-Quarter Mile of a School

Since certification of the 2017 SEIR, Heritage Elementary School has begun to function as an elementary school. The Project would include the allowance of additional residential development within the existing TLSP footprint. The Project does not propose and would not permit development of industrial land uses that would emit hazardous emissions or use substantial amounts of hazardous materials. The TLSP would permit development of residential, commercial, institutional, and open space land uses. Hazards to students resulting from hazardous materials used in conjunction with uses at Heritage Elementary School and Legacy Magnet Academy would be less than significant after compliance with regulations. No new substantial impact would occur.

Hazardous Materials Sites

Since certification of the 2017 SEIR, no new sites have been identified within the TLSP according to the GeoTracker database (State Water Resource Control Board, 2023). Ten sites continue to remain open as military cleanup sites. These sites have been previously analyzed under the certified FEIR/EIS, subsequent CEQA documentation, and the 2017 SEIR. Therefore, no new or substantially more severe impacts are anticipated to occur.

Airport Hazards

The FEIR/EIS acknowledged that development within the TLSP area would be subject to Federal Aviation Administration (FAA) height restrictions and reviewed by the Airport Land Use Commission (ALUC) for Orange County to ensure there is no interference with flight operations. The FEIR/EIS determined that compliance with these requirements would reduce impacts to less than significant.

The Project would permit development of a net increase of 4,466 residential units compared to the Adopted TLSP. The ALUC for Orange County reviews projects with buildings of a certain height (110 to 200 feet depending on location in the TLSP area) to reduce interference with flight operations. The proposed Project would not increase the allowable building heights within these ranges. Any structures in the TLSP that exceed

the height restrictions in the John Wayne Airport Environs Land Use Plan (AELUP) would also be subject to an obstruction evaluation by the FAA and ALUC to determine whether safety hazards would result. Consistency with these regulations would ensure airport-related safety hazards are less than significant. No new significant impact would occur.

Emergency Response Plan

Pursuant to the City's Emergency Operations Plan, specific evacuation requirements will vary with each situation, but should be carried out in a manner consistent with other critical functions (City of Tustin, 2019). Under ideal circumstances there will be enough time for radio and/or television stations to broadcast the required evacuation information via the Emergency Alert System, and if enough time is available, copies of the evacuation order or notice and route. The Project site is not designated as an emergency evacuation route. The Project would not impair the implementation of evacuation protocol in the event of an emergency within the City or Project site. Additionally, each future project implemented as part of the TLSP would undergo project-level plan check with the City and would be reviewed by the City's fire department (Orange County Fire Authority) to ensure proper emergency access to and from the site. No new significant impact would occur.

Wildfire Hazards

The TLSP is not located within a fire hazard zone (California Department of Forestry and Fire Protection, 2022). Development within the TLSP area is required to comply with Orange County Fire Authority regulations. Buildout of the TLSP would not expose people or structures to substantial hazards from wildland fires, and no substantial new impact would occur.

7.7 HYDROLOGY AND WATER QUALITY

Water Quality

Consistent with the 2017 SEIR analysis, the design and operations phases of projects developed pursuant to the proposed Project would be required to comply with requirements of the Orange County MS4 permit (MS4 Permit, Order No. R8-2009-0030) issued by the Santa Ana Regional Water Quality Control Boad (RWQCB), and the drainage area management plan issued by OC Public Works. The MS4 Permit requires low-impact development (LID) measures intended to preserve a site's predevelopment hydrology by minimizing the loss of natural hydrologic processes such as evapotranspiration, and runoff detention. Further, project-specific water quality management plans (WQMP) will be prepared for future development projects pursuant to the MS4 Permit. Projects developed pursuant to the TLSP and the proposed Project will be required to comply with existing regulatory permitting processes.

All projects of one or more acre would be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) during construction. The SWPPP would be reviewed on a project-by-project basis as individual development projects are proposed. Implementation of project-specific SWPPPs would ensure no substantial water quality impacts would result from construction pursuant to the proposed Project. Therefore, the proposed Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality and no new significant impact would occur.

Erosion or Siltation

Major storm drainage channels and storm drains in and surrounding the site include Peters Canyon Channel extending through the eastern part of the TLSP area; Barranca Channel along the southern TLSP area

boundary; the Santa Ana-anta Fe Channel just north of the TLSP area boundary; and the Barranca Storm Drain in Red Hill Avenue along the west site TLSP area boundary. Storm drains in the part of the TLSP area east of Peters Canyon Channel drain to Peters Canyon Channel. The main storm drain systems onsite are in the western part of the TLSP area and drain to the Barranca Channel.

Construction projects pursuant to the proposed Project would prepare and implement Stormwater Pollution Prevention Plans (SWPPPs) specifying best management practices (BMPs) to be used in those projects, including erosion control and sediment control BMPs which would ensure erosion impacts do not occur from construction activities.

Buildout of the TLSP would include development of a new drainage system for the site and would require improvements to Peters Canyon Channel, Barranca Channel along the south site boundary, and to the Santa Ana-Santa Fe Channel along the north site boundary. Consistent with the 2017 SEIR analysis, future development projects developed pursuant to the TLSP and proposed TLSP SPA would comply with requirements of the Orange County MS4 permit (MS4 Permit, Order No. R8-2009-0030) issued by the Santa Ana RWQCB, and the drainage area management plan issued by OC Public Works. Compliance with the requirements of the aforementioned permit and plan, including LID requirements described above, would limit rates and volumes of runoff from the site. Therefore, no new significant impact related to erosion or siltation would occur. Therefore, the Project would not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in a substantial erosion or siltation on- or off-site.

Flooding and Surface Runoff

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) 06059C0279J and 06059C0283J, Neighborhood D North is partially mapped as a 500-year flood zone (Shaded Zone X), while the remainder of the neighborhood has been determined to be outside of the 0.2 percent annual chance floodplain (Unshaded Zone X) (Federal Emergency Management Agency, 2009). Neighborhood G is not identified within a flood zone. Therefore, the Project would not place housing or structures in a 100-year flood zone, and no new substantial impact would occur.

As part of the 2004 Master Runoff Management Plan for Tustin Legacy, described above, peak flow discharges and storm drain sizes were determined for each Planning Area based on their full buildout condition (commercial, residential, etc.). Prior to approval of individual projects within Tustin Legacy, each project must demonstrate that the proposed project peak flows are equal to or less than the ultimate condition peak flows in the master plan. For projects that will only occupy a portion of a Planning Area, the runoff management plan includes subareas with detailed hydrology calculations and peak flow limits to ensure the full buildout of the Planning Area will remain within the total allowable discharge. This analysis is reviewed and approved by the City of Tustin.

As part of the proposed Project, Neighborhood D and G are subject to an overall allowable increase of residential units (2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood G). The net increased allowance in residential units could increase the net acreage of residential development across all three neighborhoods. However, all projects built within TLSP area will still be required to demonstrate that the project peak flow runoff is equal to or less than the assumed peak flow conditions associated with the 2004 Runoff Management Plan for Tustin Legacy. The projects would also need to comply with permit conditions within the County's MS4 permit, which requires implementation of LID to avoid potential flooding. Therefore, there are no new anticipated impacts related to flooding. Therefore, no new significant impact would occur.

Risk of Flooding Due to Tsunami and Seiche

There are no inland water bodies onsite or near enough to the Project area to pose a substantial flood hazard onsite due to a seiche. Additionally, the Project area is approximately 7.6 miles inland from the Pacific Ocean, and elevations onsite range from approximately 51 feet at the southwest corner of the site to 80 feet at the northwest corner. Therefore, buildout of the Project would not place people of structures at risk of flooding due to a tsunami. Further, there is no risk of mudflow onsite due to the nearly flat topography of the site. Therefore, no new significant impacts related to flood hazard, tsunami, or seiche zones would occur.

7.8 MINERAL RESOURCES

No mineral resources valuable to the region or the State, or identified in the general plans of the cities of Tustin or Irvine, were identified in the certified FEIR/EIS. No impacts to mineral resources are identified in previous environmental documents.

The Project site is mapped as Mineral Resource Zone 1 (MRZ-1) on the Mineral Land Classification of Orange County, California, indicating that no significant mineral resources are known to be present or there is little likelihood they may be present (California Geological Survey, 1994). Additionally, no mining sites in the City of Tustin are identified in the City's General Plan (City of Tustin, 2018). Therefore, no new impact to mineral resources would occur.

7.9 RECREATION

The TLSP contains 173 acres of planned future park space in addition to the existing 93 acres of existing park. The proposed increase in residents would not result in the substantial physical deterioration of existing facilities.

As part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 284 units within Neighborhood D South, and 1,315 units within Neighborhood G. The remaining Planning Areas would remain unchanged. Therefore, the total increase in number of units within the TLSP proposed by the Project is 4,466 residential units. Utilizing the same number of persons per household used in the 2017 SEIR (2.88 persons), based on the City of Tustin average household size and occupancy rate, the Project would be anticipated to result in an increase of 12,862 residents at full buildout.

The City municipal code requires the dedication of 3 acres of parkland per 1,000 residents. The Project would add approximately 12,891 residents, requiring an additional 38.7 acres of parkland within the TLSP area at buildout. The 2017 SEIR determined that the Project would result in 6,371 new residents and would require approximately 56.7 acres of parkland at TLSP buildout. Therefore, the new total park acreage required for Project buildout would be 95.4 acres of parkland. Implementation of the TLSP includes approximately 255 acres of public parks. This exceeds the amount of parkland required by the TCC and considered in the FEIR/EIS. Since the Specific Plan Amendment would provide ample parkland, buildout would not increase the use of existing parks or cause the physical deterioration of existing recreational facilities.

Construction and operation of the proposed parks and recreation facilities would occur within the development footprint analyzed in the FEIR/EIS. Park construction and its environmental effects were analyzed throughout the FEIR/EIS, and subsequent environmental documentation. Mitigation would not be

required. Expansion of recreational facilities would not be necessitated by the proposed Project. Therefore, the Project would not result in any new or substantially more severe impacts.

7.10 WILDFIRE

The TLSP is not located within a fire hazard severity zone (California Department of Forestry and Fire Protection, 2022). In addition, the sites and areas adjacent to the sites are urbanized and do not contain hillsides or other factors that could exacerbate wildfire risks. Future residential projects proposed to achieve the City's RHNA, and associated infrastructure improvements, would be located on developed, underutilized sites or on vacant parcels proposed and zoned for mixed use development. Potential fire risk would be evaluated on a site-by-site basis and appropriate measures, if necessary, would be implemented to avoid fire risk. Therefore, the Project would result in no impact on wildfire risk.

7.11 REFERENCES

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8. EIR Preparers and Persons Contacted

EIR PREPARERS

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Simon Lin, Assistant Transportation Planner

LSA Associates, Inc.

Cara Cunningham, Associate

J.T. Stephens, Executive Vice President

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City of Tustin Parks and Recreation Department

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Irvine Ranch Water District

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Jesse Barron, Coordinator/Facilities Planner

Orange County Fire Authority

Brian Fennessy, Fire Chief

Tamera Rivers, Management Analyst

Santa Ana Unified School District

Jeremy Cogan, Director of Planning and Design

Tustin Unified School District

Rina Lucchese, Director of Communications and Community Engagement

Tom Rizzuti, Director of Facilities and Planning

Appendix A
Notice of Preparation, Scoping Comments, and Initial Study

NOTICE OF PREPARATION AND SCOPING MEETING

DATE: March 4, 2024

TO: Agencies, Organizations and Interested Parties

SUBJECT: Notice of Preparation of a Draft Supplemental Environmental Impact Report in Compliance with Title 14, Section 15082(a) of the California Code of Regulations

PUBLIC REVIEW: **March 5, 2024, to April 3, 2024**

The City of Tustin is preparing an amendment to the Tustin Legacy Specific Plan (Specific Plan). As part of that process, the City intends to prepare a Supplemental Environmental Impact Report (SEIR), pursuant to the requirements of the California Environmental Quality Act (CEQA) for the proposed Specific Plan Amendment, described below. We request your review and comments as to the scope and content of the forthcoming SEIR, as summarized in the Initial Study, available on the City's website at http://www.tustinca.org/HousingElementRezone, or available at City offices, 300 Centennial Way, Tustin, California, 92780.

AGENCIES: The City requests your review on the scope and content of the environmental information relevant to your agency's statutory responsibilities in connection with the proposed project, in accordance with California Code of Regulations, Title 14, Section 15082(b). Your agency will need to use the SEIR prepared by the City when considering any permits that your agency must issue, or other approval for the project.

ORGANIZATIONS AND INTERESTED PARTIES: The City requests your comments and concerns regarding the environmental issues associated with implementation of the proposed project.

PROJECT TITLE: Tustin Legacy Specific Plan Amendment (SPA-2024-0002)

PROJECT LOCATION: As shown in Figure 1, *Vicinity Map*, the project area for the Tustin Legacy Specific Plan, is within an urbanized area that overlaps the southern portion of the City of Tustin and the northwest portion of the City of Irvine in Orange County, California. The 1,606-acre Specific Plan area includes 1,511 acres in Tustin and approximately 95 acres in Irvine. The major roadways that border the site are Red Hill Avenue on the west, Edinger Avenue on the north, Harvard Avenue on the east, and Barranca Parkway on the south. Regional access to the Specific Plan area is also provided by Jamboree Road/State Route 261 (SR-261) and State Route 55 (SR-55).

The proposed Specific Plan Amendment is limited to Neighborhood D North, D South, and G, a portion of the Specific Plan area within the City of Tustin. Neighborhood D North is generally bound by Valencia Avenue to the north, Tustin Ranch Road to the east, Warner Avenue to the south, and Armstrong Avenue to the west. Neighborhood D South is generally bound by Warner Avenue to the north, Tustin Ranch Road to the east, Barranca Parkway to the south, and Armstrong Avenue to the west. Neighborhood G is generally bound by Edinger Avenue to the north, Jamboree Road to the east, Warner Avenue to the south and Tustin Ranch Road to the west.

DESCRIPTION: The Specific Plan was adopted by ordinance on February 3, 2003, and established the zoning for the 1,606-acre project area. It also established the necessary plans, development standards, regulations, infrastructure requirements, design guidelines, and implementation programs on which subsequent, project-related development is founded. It is intended that local public works projects, design review plans, detailed site plans, grading and building permits, or any other action requiring ministerial or

NOTICE OF PREPARATION AND SCOPING MEETING

discretionary approval applicable to the project area be consistent with the Specific Plan. The Specific Plan has been amended seven times between 2010 and 2017 in response to changing market conditions. The latest SPA occurred in 2017 (Adopted Specific Plan), which reorganized the delineated planning areas to provide additional flexibility; additionally, overall allowed residential capacity was increased and allowed nonresidential capacity was decreased.

The current SPA proposes to amend three neighborhoods, Neighborhood D South (Planning Areas [PA] 13 & 14), D North (PA 8), and G (PA 15) (see Figure 2), to increase the allowed residential capacity to be consistent with the 2021-2029 Housing Element Update (HEU). The proposed SPA would add 100 units of allowed residential capacity to Neighborhood D South, 1,911 units to Neighborhood D North, and 200 units to Neighborhood G. Compared to the Adopted Specific Plan, the proposed SPA would increase the allowed residential capacity by a total of 2,211 residential units within Neighborhoods D North, D South, and G. While the SPA would increase the residential capacity by 2,211 units, the provision for state density bonus is appliable to the Specific Plan area. The proposed allowed residential capacity increase of 2,211 and the potential of 2,759 density bonus units will be conservatively analyzed within the Draft SEIR. No changes are proposed to the allowed nonresidential capacity (i.e. office, commercial, hotel, etc.).

POTENTIAL ENVIRONMENTAL EFFECTS: A SEIR will be prepared to evaluate the Project's potential environmental impacts compared to those analyzed in the previously adopted SEIR (as amended). As determined by the Initial Study, the topic areas to be discussed in the SEIR are Air Quality, Energy, Greenhouse Gas Emissions, Groundwater Recharge, Land Use and Planning, Noise, Population and Housing, Public Services, Transportation/Traffic, and Utilities and Service Systems impacts.

PUBLIC REVIEW PERIOD: The City has determined to make this Notice of Preparation (NOP) and Initial Study available for public review and comment pursuant to California Code of Regulations, Title 14, Section 15082(b). Please provide any comments by **April 3, 2024 at 5:00 p.m.** to the contact person listed below.

RESPONSES AND COMMENTS: Please indicate a contact person for your agency or organization and send your responses and comments to: Samantha Beier, Senior Planner; Phone: (714) 573-3354; E-mail: SBeier@tustinca.org; Mailing Address: City of Tustin, Community Development Department, 300 Centennial Way, Tustin, CA 92780; Website: http://www.tustinca.org.

SCOPING MEETING: One scoping meeting will be held to receive comments on the proposed scope and content of the Tustin Legacy Specific Plan Amendment Draft Supplemental Environmental Impact Report (DSEIR). You are invited to attend and present environmental information that you believe should be addressed in the DSEIR. The meeting is scheduled for:

Date: Wednesday, March 20th, 2024
Time: 5:00 p.m.
Place: Community Center at The Market Place
2961 El Camino Real
Tustin, CA 92782

DOCUMENT AVAILABILITY: The Initial Study is available for public review during regular business hours at the City of Tustin Community Development Department listed above and the Tustin Library, 345 E. Main Street, Tustin. The Initial Study can be viewed on the City of Tustin website at the following address (URL): http://www.tustinca.org/HousingElementRezone.

TUSTIN

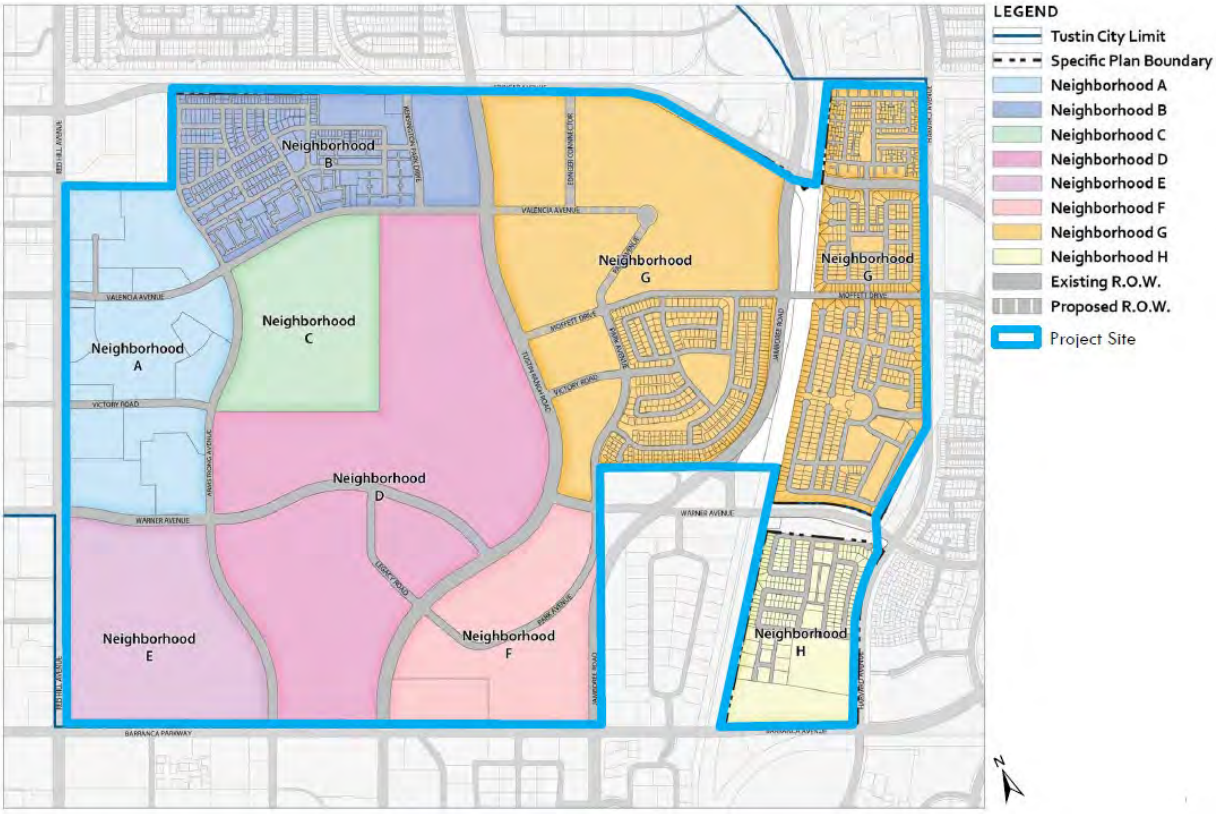
BUILDING OUR FUTURE
HONORING OUR PAST

NOTICE OF PREPARATION AND SCOPING MEETING

Figure 1 - Vicinity Map

NOTICE OF PREPARATION AND SCOPING MEETING

Figure 2 - Neighborhood Map



California Department of Transportation

DISTRICT 12
1750 East 4th Street, Suite 100 | SANTA ANA, CA 92705
(657) 328-6000 | FAX (657) 328-6522 TTY 711
https://dot.ca.gov/caltrans-near-me/district-12

April 3, 2024

Samantha Beier
City of Tustin
300 Centennial Way
Tustin, CA 92780

File: LDR/CEQA
SCH#2017-02509
LDR LOG #1994071005
I-5, I-405, SR-55, SR-261

Dear Ms. Beier,

Thank you for including the California Department of Transportation (Caltrans) in the review of the Notice of Preparation of a Draft Environmental Impact Report for the Tustin Legacy Specific Plan Amendment (TLSP). The proposed specific plan would amend Neighborhood D South, D North, and G to Increase the allowed residential capacity to be consistent with the 2021-2029 Housing Element Update (HEU). The proposed upzoning would add a total of 855 additional residential units to the existing residential capacity of Neighborhoods D and G. The HEU also included 1,356 buffer units that are intended to make up for any potential units that are not developed on the other HEU sites. Therefore, a total of 2,211 units have been Incorporated into the residential caps of the TLSP Neighborhoods D North, D South, and G. The provision for density bonus pursuant to the Surplus Land Act is applicable to the TLSP area, and therefore, the application of density bonus has been analyzed through the addition of 2,759 units. Together, the HEU Regional Housing Needs Assessment (RHNA) units, buffer units, and density bonus units total an additional 4,970 units that will be analyzed in the Draft Supplemental Environmental Impact Report. The Project site is generally bounded by Red Hill Avenue to the west, Edinger Avenue to the north, Harvard Avenue to the east, and Barranca Parkway to the south.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Caltrans is a responsible agency on this project and has the following comments:

1. Due to the proximity of the proposed project to I-5, potential impacts are anticipated to the mainline, on/off ramps, and intersections. Please submit a Traffic Impact analysis that includes any potential mitigation measures necessary. If impact analysis leads to findings of significance, please coordinate

with Caltrans District 12 Local Development on development of a Traffic Mitigation Agreement or similar effort.

2. Please refer to OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA and Caltrans' Transportation Impact Study Guide for the VMT assessment. Pursuant to SB 743, VMT is a required metric for transportation impact analysis per CEQA Guidelines Section 15064.3. Please provide a VMT analysis for this project in the EIR. Caltrans' Transportation Impact Study Guide can be found on: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf and OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

3. Caltrans supports the design of Complete Streets that include high-quality pedestrian, bicycle, and transit facilities that are safe and comfortable for users of all ages and abilities and promote improved first-/last-mile connections. Keeping in mind Caltrans' safety first approach, please visit https://highways.dot.gov/safety/proven-safety-countermeasures) for Safe System Approach (SSA) to use any of 28 proven safety countermeasures for speed, ped/bike, roadway departure, intersections, and crosscutting.

4. Consider specifications listed in HDM 1003.1 (CHAPTER 1000 (ca.gov)) when designing the Class I bikeway proposed on PDF page 373 of the draft initial study. Caltrans applauds the inclusion of bicycle parking facilities within this plan. For additional guidance on providing functional bike parking, see the attached "Essentials of Bike Parking" guidance created by the Association of Pedestrian and Bicycle Professionals (link to online PDF: https://www.apbp.org/Publications). The study notes the desire to Construct, contribute, or dedicate land for the provision of off-site bicycle trails..." (PDF page 434). See OCTA's bikeways planning for planned projects in the region and align future plans with this document. https://www.octa.net/getting-around/active/oc-bike/bikeways-planning/overview/

5. Please provide a discussion of all existing transit route services such as local, intra-county and inter-regional bus services if any, within the nearby proposed project areas including the regional connectivity into the rail services provided by Metrolink and Amtrak Pacific Surfliner. Also, please provide a discussion about City's multimodal mobility strategies and improvement opportunities to accommodate additional demand for transit services with the anticipated increase in population.

6. Encourage the use of transit among future residents, visitors, and workers of the development. Increasing multimodal transportation may lead to a reduction to congestion, Vehicle Miles Traveled, and improve air quality. Provide adequate wayfinding signage and related amenities to the transit stops within the project vicinity.

7. Ensure that truck parking, ingress and egress, and staging will not interfere with vehicle parking, pedestrian paths, or bicycle lanes/bicycle parking.

8. Establish freight pick up & drop off times that do not coincide with peak commute hours to reduce passenger vehicle conflicts and congestion for freight. Consider designating on-street freight-only parking and delivery time windows so trucks will not resort to double parking, thus causing street traffic congestion.

9. For the multifamily residential units proposed, consider how many individual packages will be delivered daily to individual residences. Amazon lockers or an equivalent shared drop-off location can help reduce the amount of driving done by delivery trucks and can increase the efficiency of deliveries.

10. Work with local partners and community representatives to mitigate any truck traffic routing onto residential streets or conflicting with other road users, including and especially bicyclists and pedestrians.

11. In the event of any work performed within Caltrans right-of-way, an encroachment permit will be required prior to construction. Please submit all applications and associated documents/plans via online web portal base Caltrans Encroachment Permit System (CEPS) at https://ceps.dot.ca.gov/

12. Any work performed within Caltrans right of way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans R/W prior to construction. Prior to submitting to Caltrans Permit's branch, applicant should fill out Applicant's Checklist to Determine Applicable Review Process (QMAP List) Form TR-0416 to determine if project oversight/coordination with Caltrans Project Manager is needed. Applicant must submit a signed Standard Encroachment Permit application form TR-0100 along with a deposit payable to Caltrans. Deposit amount will be dependent on when the application is submitted. Public corporations are legally exempt from encroachment permit fees. Please note that all utility work should be disclosed prior to permit submittal, and utility companies are to apply for separate permits for their corresponding work.

Please continue to coordinate with Caltrans for any future developments that could potentially impact State transportation facilities. If you have any questions, please do not hesitate to contact Maryam Molavi, at Maryam.Molavi@dot.ca.gov.

Sincerely,

Scott Shelley
Branch Chief – Local Development Review/Climate Change/Transit
District 12

Beier, Samantha

From: Kim, Tae [redacted]
Sent: Friday, March 29, 2024 6:28 PM
To: Beier, Samantha
Cc: Matsumoto, Carri; Wolfe, Simone; Collins, Heather; Curiel, Hugo; Melendez, Joe
Subject: Tustin Legacy Specific Plan Amendment (SPA-2024-0002)
Attachments: 240329 LTR-RSCCD-City of Tustin.pdf

Hello Samantha Beier,

Attached is a letter regarding the Tustin Legacy Specific Plan Amendment (SPA-2024-0002).

I will be on vacation and returning on April 8th.

Should you have any immediate questions, please contact Hugo Curiel.

Thank you,

Tae H. Kim
Director | Facilities Planning, Construction and District Support Services
Rancho Santiago Community College District | 2323 N. Broadway, Suite 112, Santa Ana, CA 92706

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March 29, 2024

Samantha Beier
Senior Planner
City of Tustin – Community Development Department
300 Centennial Way
Tustin, CA 92780

Via email: sbeier@tustinca.org

RE: Notice of Preparation of a Draft Supplemental Environmental Impact Report
Tustin Legacy Specific Plan Amendment (SPA-2024-0002)

Dear Ms. Beier:

On behalf of the Rancho Santiago Community College District, this letter serves as a comment to the above referenced Tustin Legacy Specific Plan Amendment (SPA-2024-0002).

The District has facilities located at 15991 Armstrong Boulevard, Tustin, CA 92782. This location is home to the Orange County Sheriff's Regional Training Academy (OCSRTA) and provides important training as part of the District's public safety programs.

Upon review of the plan, the District supports the proposed increase in housing density, but recommends a spatial buffer directly across from the OCSRTA property to new residential units. An increased spatial separation will reduce the amount of sound transmission and allow for the OCSRTA and new residential development to harmoniously coexist. Spatial separation could be achieved by placing a green buffer zone, retail or commercial uses, parking lot/structure, or increased setback for residential units directly across from the OCSRTA.

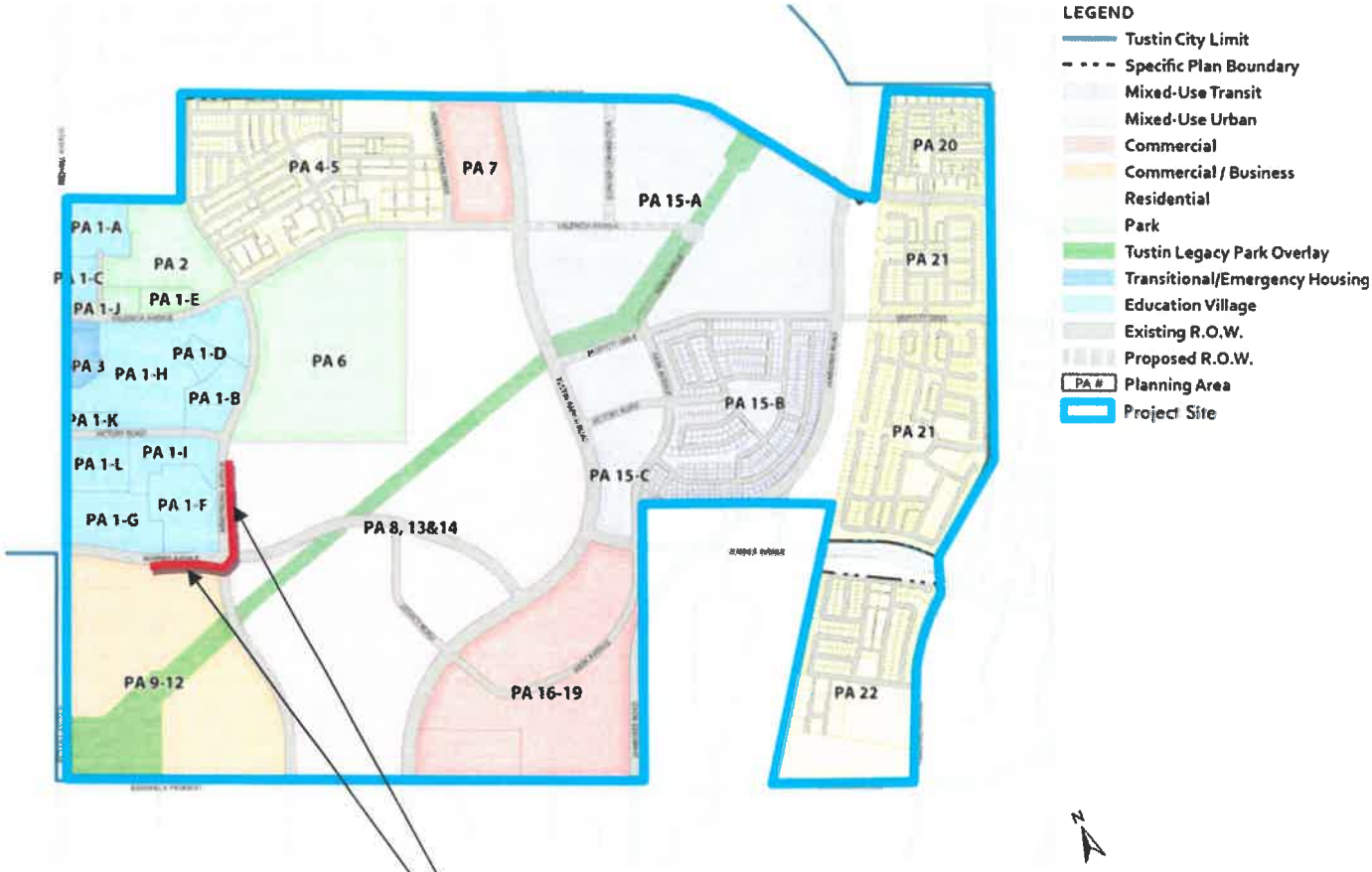
Please feel free to contact my office at (714) 480-7510 if you need further assistance.

Sincerely,

Tae H. Kim
Director - Facility Planning, Construction & District Support Services

BOARD OF TRUSTEES:
Tina Arias Miller, Ed.D. • David Crockett • John R. Hanna • Zeke Hernandez • Sal Tinajero • Daisy Tong • Phillip E. Yarbrough
CHANCELLOR:
Marvin Martinez

Existing Tustin Legacy Specific Plan Designation



Tustin Legacy Specific Plan
City of Tustin

Figure 2-6

SPATIAL SEPARATION

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

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NAHC.ca.gov

March 5, 2024

Samantha Beier
City of Tustin
300 Centennial Way
Tustin CA 92780

Re: 1994071005, Tustin Legacy Specific Plan Amendment Project, Orange County

Dear Ms. Beier:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Col. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native Americon tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declarotion or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native Americon tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or ony other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Notive American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes thot mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to o tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial ploce may ocquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report moy not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Reseorch pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Plonning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequotely assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historicol Research Information System (CHRIS) Center (https://ohp.parks.co.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@NAHC.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

Beier, Samantha

From: Jose Lee [redacted]
Sent: Wednesday, March 20, 2024 11:14 AM
To: Beier, Samantha
Subject: Tustin Legacy SPA

Follow Up Flag: Follow up
Flag Status: Completed

Hello Samantha,

I am going over the proposed rezoning of Tustin Legacy, and wanted to know what the neighborhoods are. I read that there is Neighborhood D, D South, D North, etc., but do not know exactly where they are located.
I live next to APN's 430-391-28 and 430-391-27, and am worried about the traffic impact this will have. We just had a stop sign installed, which has improved the safety of drivers and people crossing the intersection of Moffett and Windrow. However, I can see that the streets might not be sufficient if housing becomes too dense here, and that street parking might become an issue.

Best regards,
Jose Lee

Beier, Samantha

From: Tibor Kelemen <[redacted]>
Sent: Wednesday, April 3, 2024 4:49 PM
To: Beier, Samantha
Subject: Comments to Notice of Preparation and Scoping

Hi Samantha,

I am writing in response to the City's notice regarding the Tustin Legacy Specific Plan amendment. I am a resident of Greenwood and have lived there since the community was built back in 2016. While I am not opposed to the City's efforts to do what is best for the City in general, I am opposed to increasing the density directly behind Greenwood in Neighborhood G.

Our Greenwood community is made up of young families with young children. An increase in density directly adjacent to Greenwood would increase traffic on Moffett and potentially lead to pedestrian accidents. My three young children often ride their bicycles along Moffett, and the thought of more cars traveling down the road than necessary is not one that I welcome.

Besides the increase in traffic on Moffett, an increase in density in Neighborhood G to something greater than Greenwood is today would inevitably lead to a parking problem in Greenwood at the expense of the Greenwood residents. Also, with the increase in cars in the Greenwood neighborhood, the threat of further accidents and theft would likely increase, too. That would indirectly also increase the need for police presence, which nobody hopes for.

Therefore, I kindly ask that you request the City Council not to allow the increase in the density in Neighborhood G and to consider something in line with what is working beautifully in Greenwood.

Thank you!

Tibor Kelemen
CEO

Kelemen Company
[redacted]

KELEMEN COMPANY
19100 Von Karman Ave., Ste. 480 | Irvine, CA 92612 | www.kelemencompany.com

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Tustin Legacy Specific Plan Amendment

Initial Study

Lead Agency:

City of Tustin
300 Centennial Way
Tustin, CA 92780

CEQA Consultant:

ENVIRONMENT | PLANNING | DEVELOPMENT SOLUTIONS, INC.

3333 Michelson Drive, Suite 500
Irvine, CA 92612

March 2024

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Appendices

Appendix A Biological Record Search Results
Appendix B Cultural Record Search Results
Appendix C 2022 Annual Mitigation Monitoring Report

Acronym List

A-P	Alquist-Priolo Earthquake Fault Zoning Act
AQMP	Air Quality Management Plan
AB	Assembly Bill
APN	Assessor's Parcel Numbers
BMPs	Best Management Practices
CARB	California Air Resources Board
CBC	California Building Code
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibel
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
GHG	Greenhouse Gas
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NPDES	National Pollutant Discharge Elimination System
NAHC	Native American Heritage Commission
NOx	Nitrous Oxides
O_3	Ozone
PM	Particulate Matter
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
SWPPP	Stormwater Pollution Prevention Plan
TPZ	Timberland Production Zone
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
WQMP	Water Quality Management Plan

1 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY

This Initial Study has been prepared in accordance with the following:

California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Sections 21000 et seq.); and Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines) (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 et seq.), as amended and approved on December 28, 2018.

Pursuant to CEQA, this Initial Study has been prepared to analyze the potential for significant impacts on the environment resulting from implementation of the proposed Project, described in greater detail in Section 3.0, *Project Description*. As required by State CEQA Guidelines Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency, the City of Tustin, to determine if a Mitigated Negative Declaration or an Environmental Impact Report is required to evaluate the potential environmental impacts associated with the Project.

This Initial Study informs City of Tustin decision-makers, affected agencies, and the public of potentially significant environmental impacts associated with the implementation of the Project. A "significant effect" or "significant impact" on the environment means *"a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project"* (State CEQA Guidelines Section15382).

Given the Project's broad scope and level of detail, combined with previous analyses and current information about the site and environs, the City's intent is to adhere to the following CEQA principles:

- Provide meaningful early evaluation of site planning constraints, service and infrastructure requirements, and other local and regional environmental considerations (Public Resources Code Section 21003.1).
- Encourage environmental considerations to be incorporated into project conceptualization, design, and planning at the earliest feasible time (State CEQA Guidelines Section 15004[b][3]).
- Specify mitigation measures for reasonably foreseeable significant environmental effects and commit the City to future measures containing performance standards to ensure their adequacy when detailed development plans and applications are submitted (State CEQA Guidelines Section 15126.4).

1.2 DOCUMENT ORGANIZATION

This Initial Study includes the following sections:

Section 1. Introduction

Provides information about CEQA and its requirements for environmental review and explains that an Initial Study was prepared to evaluate the proposed Project's potential impact to the physical environment, and to determine if an Environmental Impact Report (EIR) is required.

Section 2. Environmental Setting

Provides information about the proposed Project's location.

Section 3. Project Description

Includes a description of the proposed Project's physical features and characteristics.

Section 4. Environmental Checklist

Includes the Environmental Checklist from Appendix G of the State CEQA Guidelines and identifies what subject areas were determined to be new significant environmental effects or previously identified effects that have a substantial increase in severity, based on the analysis in Section 5.

Section 5. Environmental Analysis

Evaluates the proposed Project's potential to result in significant adverse effects to the physical environment and identifies if an EIR is required, and what environmental topics need to be analyzed in the EIR if so.

1.3 PROJECT BACKGROUND

The City of Tustin prepared the 2021-2029 Housing Element of the General Plan in accordance with Government Code Section 65580 et seq. The City is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The update to the Housing Element covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029. The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with the State-allocated RHNA.

On October 5, 2021, the City Council adopted Resolution No. 21-86, certifying the Negative Declaration (ND) for GPA 2021-0002 (and Resolution No. 21-87, approving GPA 2021-0002), which analyzed environmental impacts related to the City's Draft Housing Element Update of the General Plan. The Draft Housing Element Update (HEU) was prepared as required by State Housing Element law. The City received formal certification of their Housing Element Update from the State Department of Housing and Community Development (HCD) on September 12, 2022. On October 4, 2022, the City Council adopted Resolution No. 22-47, approving General Plan Amendment 2022-0002 for the final Housing Element Update.

The 2021-2029 Housing Element includes several provisions that aim to ensure the City can meet the required "fair share" of affordable housing units as specified by the HCD. During the Housing Element process, the City assessed a number of sites and areas throughout the community that would be able to accommodate the City's remaining assigned 2021 RHNA. The City identified 19 sites and one housing category (accessory dwelling units [ADUs]/junior accessory dwelling units [JADUs]) as qualifying sites to accommodate the remaining allocated units. Of the 19 sites, Housing Element inventory site 1A, 1B and 2 (Modified Project area), which are within the TLSP, were identified as requiring rezoning under Housing Element Program 1.1a to allow for high density residential development.

1.4 PREVIOUS SPECIFIC PLAN AND ENVIRONMENTAL DOCUMENTATION

Specific Plans

The Marine Corps Air Station (MCAS) Tustin Specific Plan was adopted by ordinance on February 3, 2003, and established the zoning for the 1,606-acre TLSP area. It also established the necessary plans, development standards, regulations, infrastructure requirements, design guidelines, and implementation programs on which subsequent, project-related development is founded. It is intended that local public works projects, design review plans, detailed site plans, grading and building permits, or any other action requiring ministerial or discretionary approval applicable to the project area be consistent with the Specific Plan. The Specific Plan was amended six times between 2010 and 2014 in response to changing market conditions. In 2011, the City developed a "Disposition Strategy" as a recommended framework for future disposition and development of properties in the Specific Plan, which was subsequently updated in 2023 and re-titled as the "Tustin Legacy Development and Disposition Manual." The last comprehensive CEQA documentation prepared for the TLSP area was the 2017 Supplemental EIR/EIR associated with an amendment to the MCAS

Tustin Specific Plan, which renamed the "MCAS Tustin Specific Plan" to "Tustin Legacy Specific Plan" and modified the numbering and land uses in the TLSP planning areas. A number of environmental addenda and tiering documents have also been prepared for projects implemented in the TLSP. The environmental documentation for the more significant implementation actions is described below.

2001 Final Environmental Impact Statement/Environmental Impact Report

A final joint program environmental impact statement/final environmental impact report ("2001 FEIS/EIR," State Clearinghouse [SCH] # 94071005) was prepared for the disposal and reuse of the MCAS Tustin and certified by the Tustin City Council on January 16, 2001 (Resolution 00-90). On March 2, 2001, a Record of Decision was issued by the US Navy approving the 2001 FEIS/EIR and Reuse Plan. The 2001 FEIS/EIR analyzed the consequences of the Navy disposal and local community reuse of the MCAS Tustin site per the Reuse Plan and the MCAS Tustin Specific Plan/Reuse Plan (Adopted Specific Plan or Adopted Project) in accordance with CEQA and the National Environmental Policy Act (NEPA). The 2001 FEIS/EIR covered the entire 1,606 acres of the TLSP area in both Tustin and Irvine. The 2001 FEIS/EIR included implementation actions that the cities were required to fulfill on the MCAS Tustin Specific Plan/Reuse Plan, including the adoption of the MCAS Tustin Specific Plan/Reuse Plan and MCAS Tustin Redevelopment Plan by the City of Tustin. The preferred reuse plan analyzed in the 2001 FEIS/EIR allowed up to 11.4 million square feet (SF) of nonresidential land uses and 4,601 residential units in the cities of Tustin and Irvine. Pursuant to the implementation actions, the Tustin City Council adopted the MCAS Tustin Specific Plan/Reuse Plan on February 3, 2003 (Ordinance No. 1257).

Since certification of the 2001 FEIS/EIR, the City has prepared one supplement and two addenda to the 2001 FEIS/EIR and has certified or adopted multiple CEQA documents for amendments to the MCAS Tustin Specific Plan and development projects in the Tustin Legacy area. The purpose and application of the supplement and addenda are summarized below. The original 2001 FEIS/EIR, the supplement, and the addenda are collectively referred to herein as the "FEIS/EIR."

2004 Supplemental EIR

The "Supplemental EIR to the Final EIS/EIR for the Disposal and Reuse of Marine Corps Air Station, Tustin, California: Extension of Tustin Ranch Road between Walnut Avenue and the Future Alignment of Valencia North Loop Road" ("2004 SEIR," SCH# 1994071005) was certified on December 6, 2004. It analyzed the impacts of a one-mile extension of Tustin Ranch Road from Walnut Avenue (north) to the future alignment of Valencia North Loop Road (south). The segment included an overpass spanning the Orange County Flood Control District right-of-way, the Orange County Transportation Authority / Southern California Regional Rail Authority railroad right-of-way, and Edinger Avenue.

The 2004 SEIR determined that there were no substantial changes in the existing conditions or new significant environmental impacts associated with aesthetics, agriculture resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services/utilities, and recreation. The 2004 SEIR focused on three environmental topics: transportation/traffic, air quality, and noise. Mitigation measures were adopted for all three topic areas. The significant unavoidable adverse impacts remained with respect to air quality (construction-related and long-term emissions) and traffic (intersections of Tustin Ranch Road/Walnut Avenue and Jamboree Road/Barranca Parkway), and the 2004 SEIR relied on the statement of overriding considerations adopted with certification of the 2001 FEIS/EIR.

2006 Addendum

On April 3, 2006, the City certified the "MCAS Tustin Zone Change (Specific Plan Amendment) 05-002, Master Developer Disposition and Development Agreement, and Development Plan Addendum to the Final Environmental Impact Statement/Environmental Impact Report for the Disposal and Reuse of the MCAS

Tustin" ("2006 Addendum"). The Specific Plan Amendment reduced permitted nonresidential development in the project area by about one million SF to approximately 10.4 million SF of nonresidential uses but retained the same number of residential units—i.e., 4,601. The zone change adjusted the planning area boundaries and redistributed or eliminated planned land uses but did not increase the overall development potential or residential capacity allowed under the Specific Plan. The Disposition and Development agreement was made to facilitate the sale, leasing, and development of Tustin Legacy.

2013 Addendum

An addendum to the FEIS/EIR was prepared to process General Plan Amendment 2013-001, Specific Plan Amendment 2013-001, Development Agreement 2013-002, and an Agreement for Exchange of Real Property between the City and South Orange County Community College District on 22 acres. The land transfer was in the western part of the TLSP area near the intersection of Red Hill Avenue and Valencia Avenue. The project added a new local street, Bell Avenue (now named Victory Road between Red Hill Avenue and Armstrong Avenue), to service adjacent uses; added an allowable land use (private for-profit noneducational uses); and increased allowable building square footages in the education village (Neighborhood A).

2017 Supplemental EIR/EIS

A Supplemental EIR/EIS (SEIR/EIS) was prepared to process the TLSP Amendment (2015-001) and General Plan Amendment (2015-002). The TLSP Amendment was prepared to facilitate development of the remaining undeveloped TLSP area in the City of Tustin. These remaining parcels would be sold, leased, or developed by the City. Eventually these parcels would be developed by a number of landowners within the framework established by the TLSP. Additionally, the TLSP Amendment included changes in land uses for the remaining Planning Areas 8 through 19, which resulted in 2,212 more residential units and 1,755,306 fewer SF of non-residential land use within the Tustin Legacy Specific Plan (TLSP). The TLSP SPA was approved by the City of Tustin on July 18, 2017.

2019 Brookfield Development (The Landing)

In 2019, Resolution No. 19-54 was signed, approving a Tentative Tract Map (TTM) and design review of a multifamily project including 400 condominium units within PA 8, 13, and 14 of Neighborhood D South. The project included 117 single family detached units, 129 townhomes, 154 flats and townhomes, a community facility, and other neighborhood amenities over approximately 107 gross acres. The project was determined to be consistent with the previously approved FEIS/EIR and subsequent CEQA documentation prepared for the project area. This project is partially constructed and is anticipated to be completed in 2024.

Subsequent Environmental Review

The FEIS/EIR was a Program EIR that was intended as the CEQA compliance for future development consistent with the MCAS Tustin Specific Plan. The FEIS/EIR analyzed a multiyear development period for the planned urban reuse project. As individual development projects were proposed in the TLSP area, the City evaluated and determined whether the environmental impacts of individual activities were fully analyzed in the FEIS/EIR. The City could approve projects that were within the scope of the project as analyzed by the FEIS/EIR. For projects that are not within the scope of the FEIS/EIR, the City would determine the appropriate level of CEQA review (as discussed in Chapter 1, Executive Summary, Section 1.2).

2 ENVIRONMENTAL SETTING

2.1 PROJECT LOCATION

The City of Tustin is located in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east; Santa Ana to the west; and Orange and unincorporated Orange County to the north. Major freeways and highways within or bordering the City of Tustin are the I-5 freeway through the center, State Route (SR) 55 to the west, and SR 261 to the east, as illustrated in Figure 2-1, *Regional Location*.

The TLSP area encompasses approximately 1,606 acres which includes 1,511 acres in southern Tustin and 95 acres in northeastern Irvine. The TLSP area is generally bound by Red Hill Avenue to the west, Edinger Avenue to the north, Harvard Avenue to the east, and Barranca Parkway to the south. The local vicinity and the boundary of the TLSP area are illustrated in Figure 2-2, *Local Vicinity*.

The Modified Project area consists of three properties spread across two geographically defined areas, referred to as Neighborhoods in the TLSP: Neighborhood D and Neighborhood G.

- The portions of Neighborhood D that are identified within the housing element sites inventory include 84.73 acres of the total 190 acres of Neighborhood D North and 124 acres of Neighborhood D South. Parcels identified as housing sites within Neighborhood D North (HE Site 1A) included 39.87 acres, and D South (HE Site 1B) included 44.86 acres. Neighborhood D North is generally bound by Valencia Avenue to the north, Tustin Ranch Road to the east, Warner Avenue to the south, and Armstrong Avenue to the west. Neighborhood D South is generally bound by Warner Avenue to the north, Tustin Ranch Road to the east, Barranca Parkway to the south, and Armstrong Avenue to the west.
- Neighborhood G is in the northeastern portion of the TLSP site, and the housing element inventory allocates approximately 50 acres of the 271 total acres as being available for residential development. Neighborhood G is generally bound by Edinger Avenue to the north, Jamboree Road to the east, Warner Avenue to the south and Tustin Ranch Road to the west.

Figure 2-3, *TLSP Neighborhoods*, illustrates the location of Neighborhoods D and G.

2.2 EXISTING LAND USE

Neighborhood D North is partially developed with the Legacy Magnet Academy in the north portion of the area. The remainder of Neighborhood D North is undeveloped, but has been disturbed by prior grading and improvements.

Neighborhood D South is partially developed with a residential community consisting of 400 homes in the central portion of the area. The remainder of Neighborhood D South is undeveloped, but has been disturbed by prior grading and improvements.

The southern portion of Neighborhood G is developed with single-family and multi-family residential neighborhoods. There is also an existing unpaved surface parking lot in the northern portion of Neighborhood G. The remainder of Neighborhood G is undeveloped, but has been disturbed by prior improvements.

The existing land use of the Modified Project area is identified below in *Table 2-2, Existing Land Use Summary for the Modified Project Area,* and the existing conditions are shown in Figure 2-4*, Aerial View*.

2.3 EXISTING GENERAL PLAN LAND USE AND ZONING DESIGNATIONS

The TLSP Land Use Plan divides the TLSP area into a collection of neighborhoods, each with their own characteristics and set of functions to perform within the TLSP area. Housing Element Sites 1A and 1B are located in "Neighborhood D" and Site 2 is located in "Neighborhood G".

The TLSP area, including the Modified Project area, have a General Plan land use designation of Tustin Legacy Specific Plan (TLSP) and a zoning designation of SP 1- Tustin Legacy as shown in Figure 2-4, *Existing General Plan Land Use* and Figure 2-*5, Existing Zoning*.

The Land Use Plan for TLSP has been further divided into 13 separate Planning Areas (PA) and number sub-planning areas, as shown in Figure 2-6, Existing *TLSP Land Use Plan*. Neighborhood D includes PAs 8, 13, and 14 and Neighborhood G includes PA 15. The Land Use Plan for TLSP contains ten land use designations, including an overlay designation: Mixed-Use Transit, Mixed-Use Urban, Commercial, Commercial/Business, Residential, Park, Tustin Legacy Park Overlay, Transitional/Emergency Housing, Education Village, and Public Street Right-of-Way (ROW). The land use designations have been assigned a PA number. PAs categorize the use and development regulations found within the TLSP.

The Modified Project area's existing TLSP Neighborhood designations are shown Figure 2-7, *TLSP Neighborhoods*. Table 3-1 lists the TLSP designations.

Neighborhood D North/Planning Area 8

Neighborhood D North is designated as Mixed-Use Urban with a portion containing Tustin Legacy Park Overlay. The TLSP states that the Mixed-Use Urban designation is intended to provide flexibility for a range of uses including hotel, commercial retail, commercial entertainment, public recreation, high school, and residential. The Tustin Legacy Park Overlay designation is intended to be a linear park extending from the corner of PAs 9-12 at Barranca Parkway and Red Hill Avenue in a diagonal direction, to Edinger Avenue in PA 15 complete with a variety of landscape setting such as urban hardscapes and natural softscapes. Neighborhood D North currently provides for a maximum development of 1,547,690 SF nonresidential use (no residential).

Neighborhood D South/Planning Areas 13 & 14

Neighborhood D South is designated as Mixed-Use Urban with a portion of PA 13 containing Tustin Legacy Park Overlay. The TLSP states that the Mixed-Use Urban designation is intended to provide flexibility for a range of uses including hotel, commercial retail, commercial entertainment, public recreation, high school, and residential. According to TLSP, Neighborhood D South currently provides for a maximum development of 1,672 dwelling units and 606,000 SF of nonresidential uses.

Neighborhood G/Planning Area 15

PA 15 is designated as Mixed-Use Transit with a portion containing Tustin Legacy Park Overlay. According to TLSP, the Mixed-Use Transit designation is intended to provide for transit-oriented, mixed-use developments with residential, office, commercial retail, and commercial service uses in a vertical or horizontal configuration. Planning Area 15 is located across from the Tustin Metrolink Station and is envisioned as the transit-oriented, residential core of Tustin Legacy. Neighborhood G currently provides a development maximum of 2,814 dwelling units and 1,095,200 SF of nonresidential uses.

2.4 SURROUNDING LAND USES

The surrounding land uses are shown on *Figure 2-1, Regional Location*. The TLSP area is generally surrounded to the west by commercial and industrial uses; to the north by single-family residential uses and industrial

and commercial uses; to the east by single-family residential and multi-family residential uses; and to the south by commercial and industrial uses. Additional details are provided below in Table 2-1 below.

Table 2-1: Surrounding Land Uses

Location	Existing Land Use	General Plan Designation	Zoning Designation
Northwest (Tustin)	Red Hill Avenue Business commercial, warehousing & offices	Planned Community Commercial Business (PCCB) Industrial (I)	Planned Community Commercial (PC COM)/ Pacific Center East (SP11) Planned Community Industrial (PC IND)
Northeast (Tustin)	Metrolink train tracks/station Como Channel (stormwater) Tustin Meadows & Peppertree Residential Communities (SFR) Warehousing and offices	Planned Community Residential (PCR) Planned Community Commercial Business (PCCB)	Planned Community Residential (PC RES) Planned Community Industrial (PC IND)
Southwest (Irvine)	Restaurants, retail, offices, & storage	PA 36, Irvine Business Complex: IBC Mixed-Use	PA 36, Irvine Business Complex: IBC Multi-Use
Southeast (Irvine)	Tustin Field Residential Community (MFR & SFR) OC Succulents Nursery, Creekside Education Center, parkland, & Columbus Grove Residential Community (SFR)	PA 38, Westpark II: Single Family Residential & Multi Family Residential PA 36, Irvine Business Complex: IBC Mixed-Use	PA 38, Westpark II: - Medium Density Residential & Medium-High Density Residential PA 36, Irvine Business Complex: IBC Multi-Use

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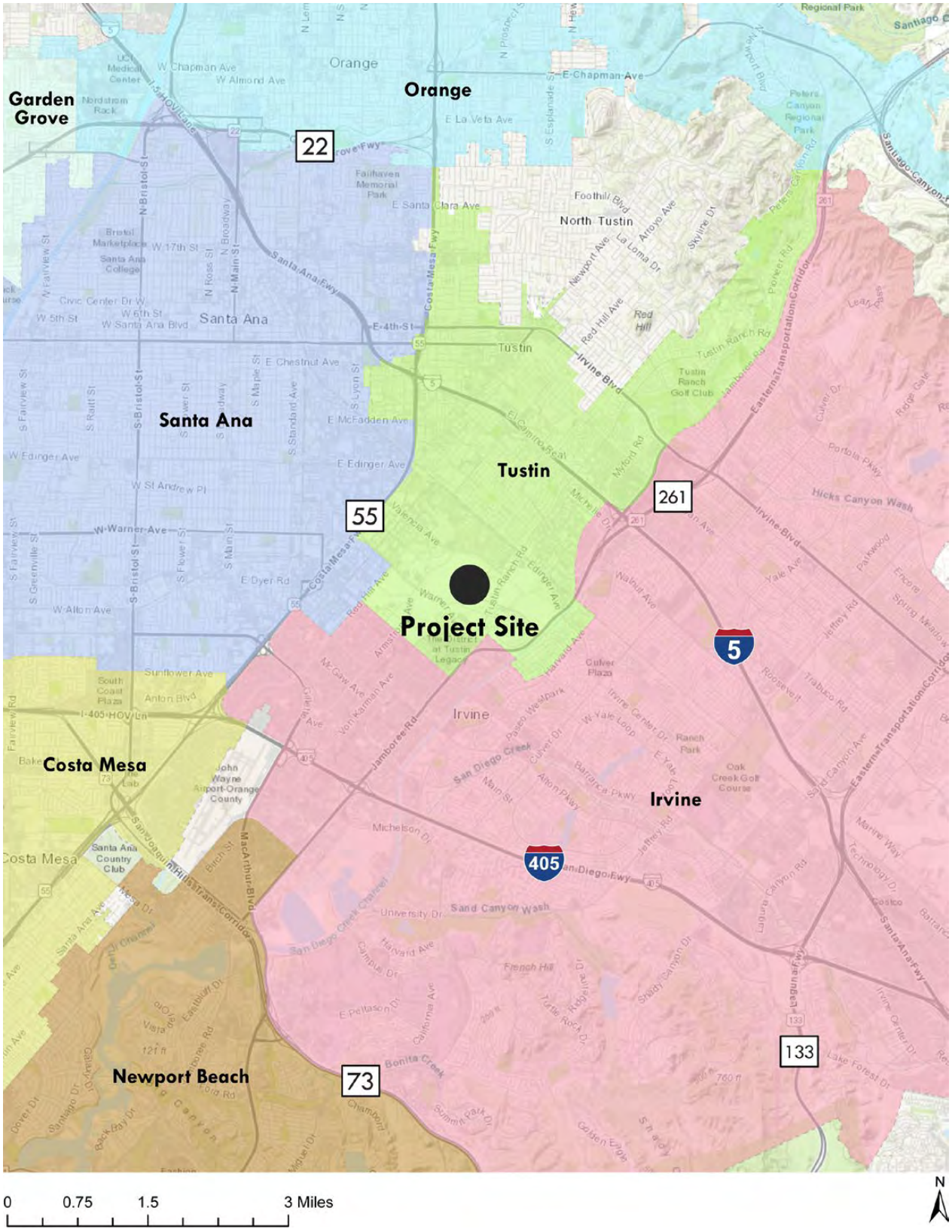
Regional Location



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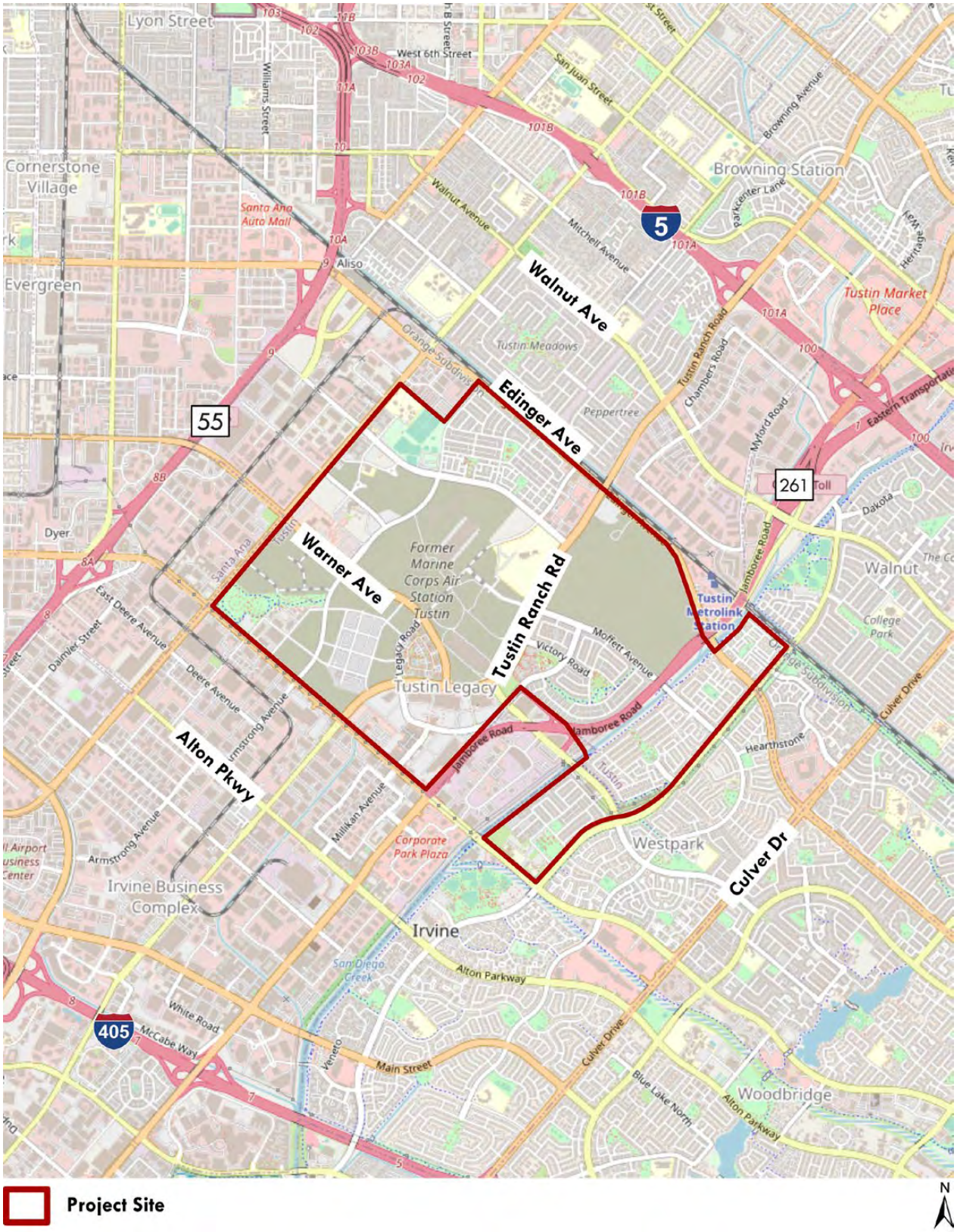
Local Vicinity



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Aerial View

5
55
Walnut Ave
Red Hill Ave
Edinger Ave
Warner Ave
Armstrong Ave
Barranca Pkwy
Jamboree Rd
Harvard Ave
Von Karman Ave
Project Site
N

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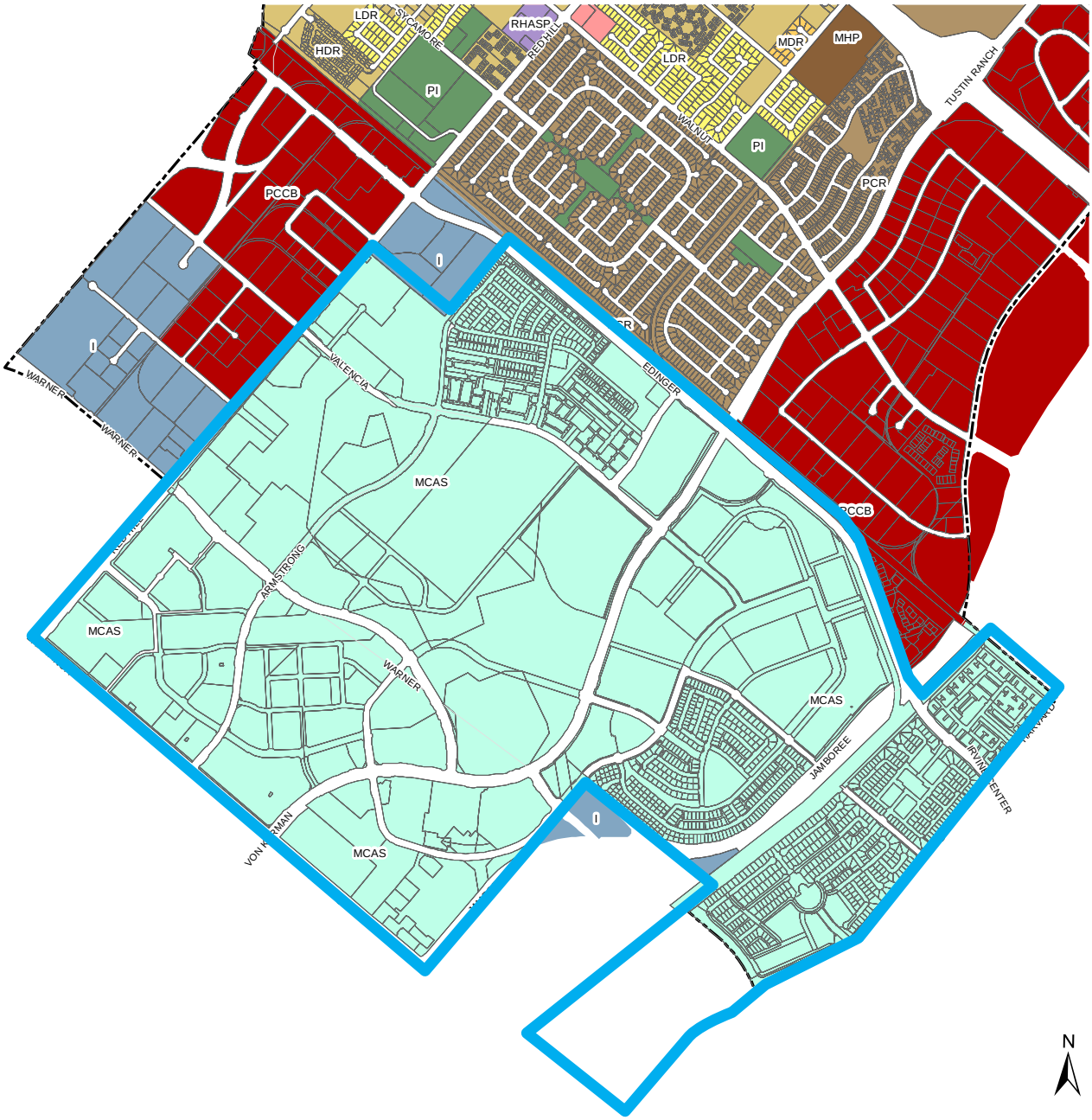
Existing General Plan Land Use Designation



Project Site

TLSP - Tustin Legacy Specific Plan

I - Industrial

PCCB - Planned Community Commercial/Business

PCR - Planned Community Residential

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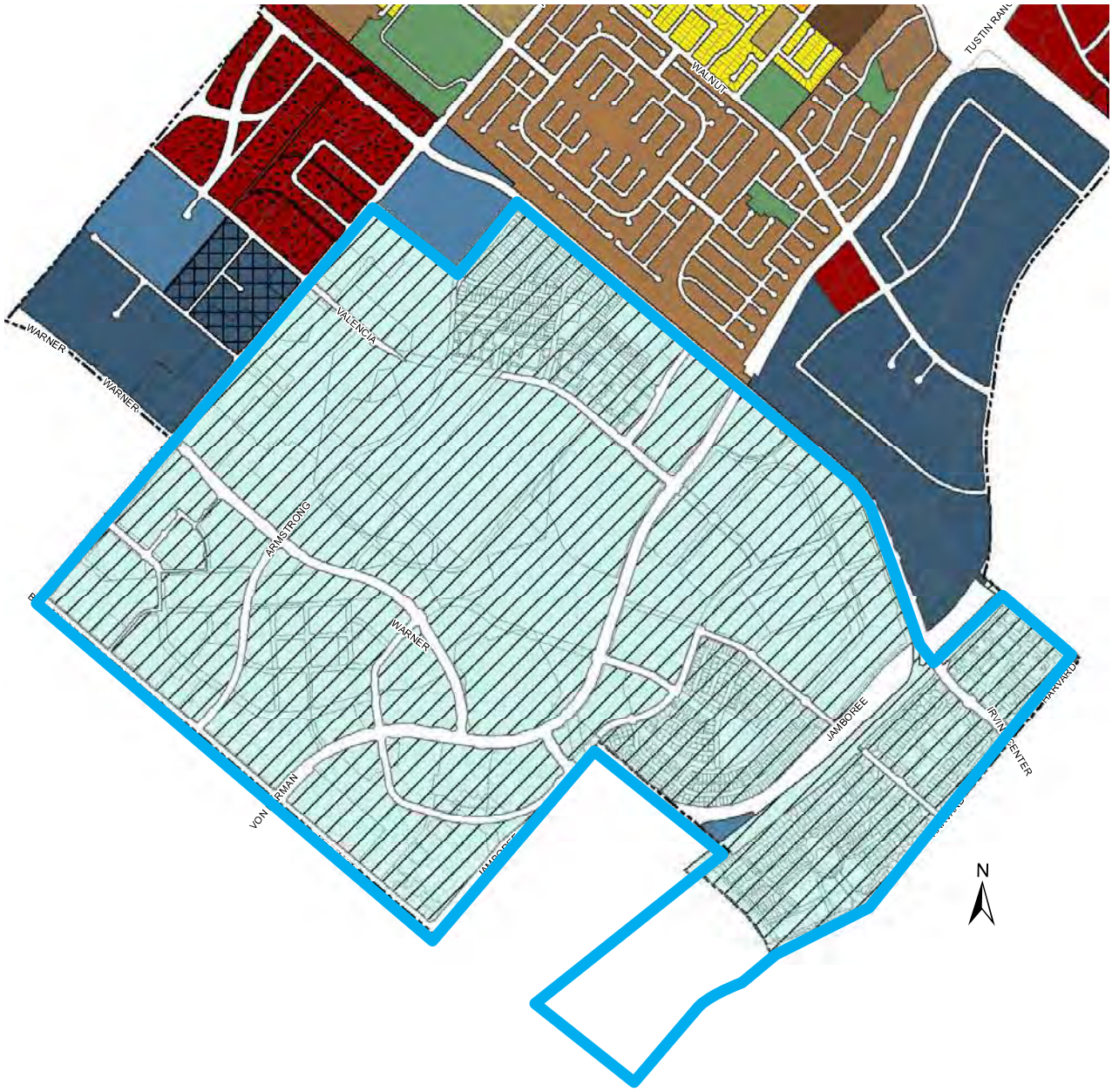
Existing Zoning



Project Site

- R1 - Single Family Residential
- R2 - Duplex Residential
- R3 - Multiple Family Residential
- R4 - Suburban Residential
- PC RES - Planned Community Residential
- PD - Planned Development
- MHP - Mobile Home Park
- PR - Professional
- C1 - Retail Commercial
- C2 - Central Commercial
- CG - Commercial General
- PC COM - Planned Community Commercial
- PM - Planned Industrial
- M - Industrial
- PC IND - Planned Community Industrial
- PI - Public and Institutional
- PCPI - Planned Community Public and Institutional
- SP 1 - Tustin Legacy
- SP 3 - International Rectifier
- SP 4 - Tustin Plaza
- SP 6 - Holt Warren
- SP 8 - East Tustin
- SP 9 - Yorba Street
- SP 11 - Pacific Center East
- SP 12 - Downtown Commercial Core
- SP 13 - Red Hill Avenue

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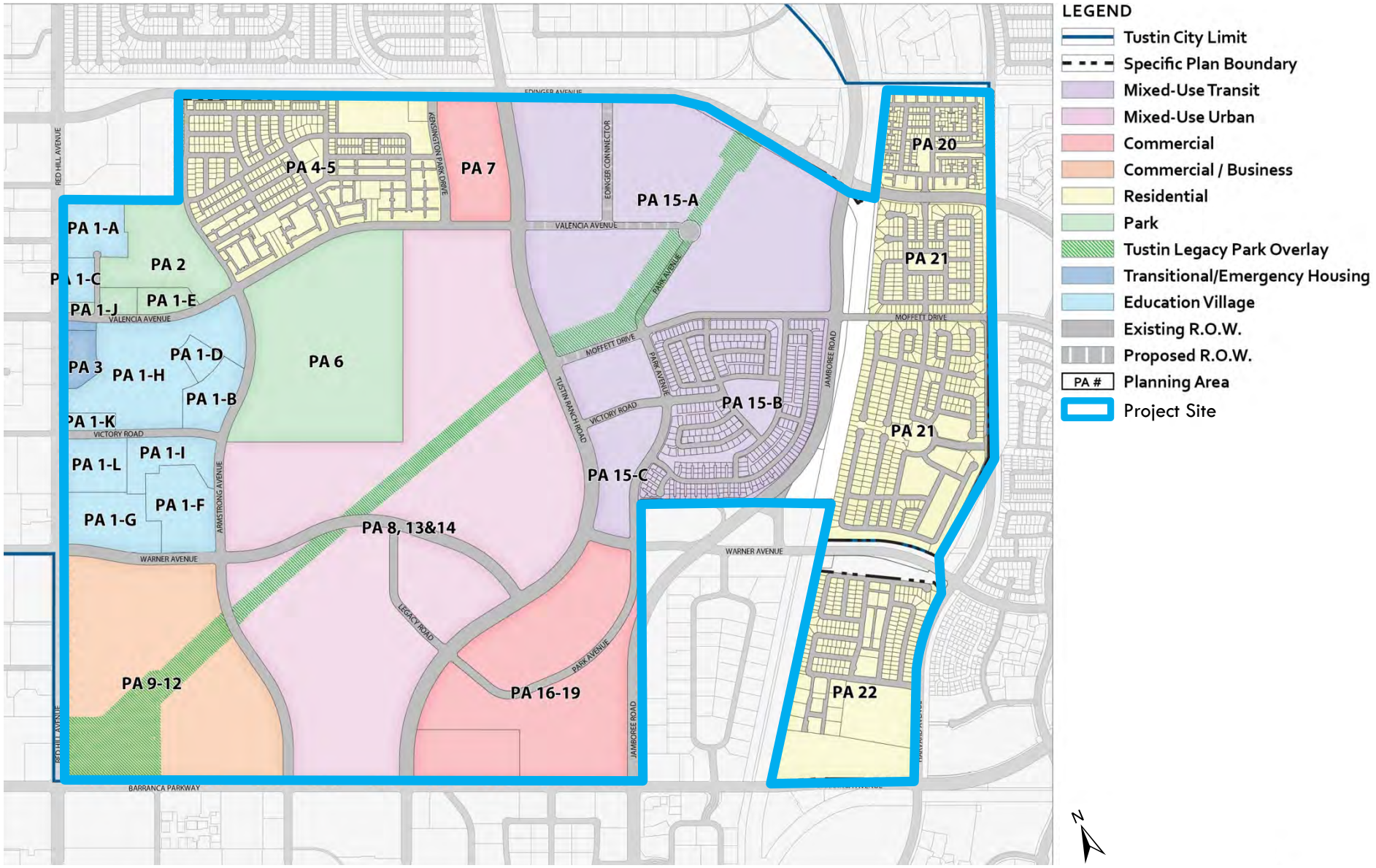
Existing Tustin Legacy Specific Plan Designation



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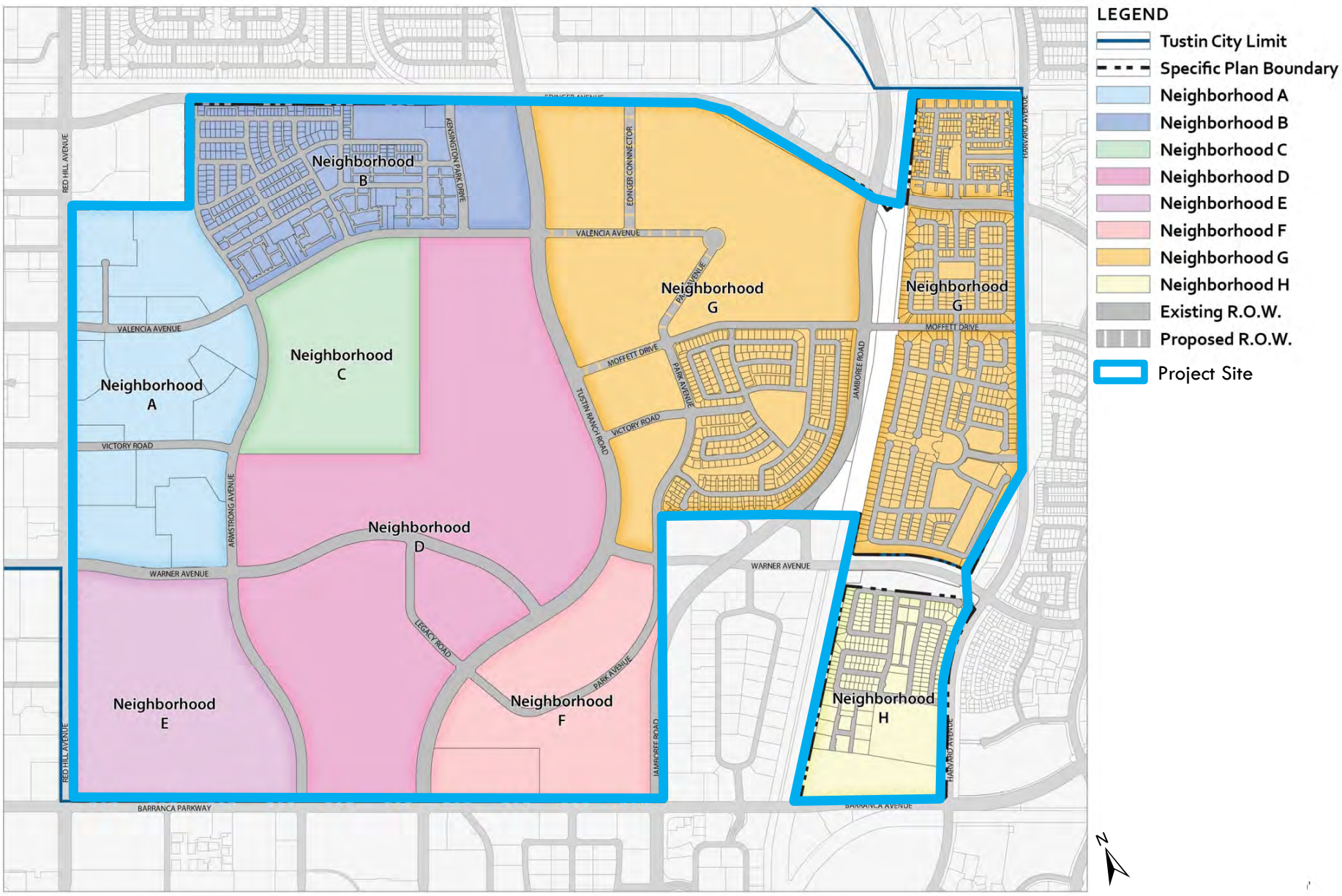
TLSP Neighborhoods



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3 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

The proposed SPA would amend Neighborhood D South, D North, and G to increase the allowed residential capacity, as shown in Table 3-1, to be consistent with the 2021-2029 Housing Element Update (HEU). The proposed upzoning would add a total of 855 additional residential units to the existing residential capacity of the Modified Project area. The HEU also included 1,356 buffer units that are intended to make up for any potential units that are not developed on the other HEU sites. Therefore, a total of 2,211 units have been incorporated into the residential caps of the TLSP Neighborhoods D North, D South, and G. The provision for density bonus pursuant to the Surplus Land Act is applicable to the TLSP area, and therefore, the application of density bonus has been analyzed through the addition of 2,759 units. Together, the HEU RHNA units, buffer units, and density bonus units total an additional 4,970 units that will be analyzed in the DSEIR.

Proposed Specific Plan Amendment

The proposed SPA, or Modified Project, proposes increased allowed capacity for the future development of residential units within the Modified Project areas, Neighborhood D South, Neighborhood D North, and Neighborhood G, consistent with the approved 2021-2029 Housing Element of the City of Tustin General Plan. Proposed additional capacity would include the housing units allocated the TLSP to accommodate the City's RHNA, buffer units included as part of the Housing Element, and density bonus units available to developers under the Surplus Land Act (SLA). Density bonus is applicable to all undeveloped residential land uses within the TLSP area, including the newly added 6th cycle RHNA units, as well as the remaining buildout capacity of the existing residential land uses within the TLSP area.

Neighborhood D North/Planning Area 8

Neighborhood D (PA 8, 13 &14) within the TLSP is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment. According to the approved TLSP, Neighborhood D North is not currently allocated any residential units.

The 39.87-acre portion of Neighborhood D North identified for increased housing capacity within the 2021-2029 Housing Element include APNs 430-381-38, -41, -91, and -95 (see Figure 3-1, *Housing Element Sites)*. The Modified Project would add 555 dwelling units to Neighborhood D buildout capacity, consistent with the adopted Housing Element.

Per Government Code Section 65583.2(h), where the inventory of City sites does not identify adequate sites to accommodate the City's RHNA for lower income households, the Housing Element must include a program to rezone additional adequate sites that can be developed for housing within the planning period and that are sufficient to accommodate 100 percent of the shortfall of sites necessary to accommodate the remaining housing need for very low-income and low-income households (i.e., lower-income households). Further, rezone sites needed to accommodate a lower-income shortfall must comply with the following requirements set forth in Government Code Section 65583.2(h):

- Permit owner-occupied and rental multifamily uses by right for developments in which twenty (20) percent or more of the units are affordable to lower income households. "By right" means local government review must not require a conditional use permit, planned unit development permit, or other discretionary review or approval.
- Permit the development of at least sixteen (16) units per site.
- Ensure the sites allow a minimum of twenty (20) dwelling units per acre.

- Ensure a) at least fifty (50) percent of the shortfall of low- and very low-income regional housing need can be accommodated on sites designated for exclusively residential uses, or b) if accommodating more than fifty (50) percent of the low and very low-income regional housing need on sites designated for mixed-uses, all sites designated for mixed-uses must allow 100 percent residential use and require residential use to occupy at least fifty (50) percent of the floor area in a mixed-use project.

Housing units added to the TLSP area to accommodate the City's RHNA, shown in Table 3-1 below, are considered shortfall sites subject to the requirements of Government Code Section 65583.2(h). In order to comply with the requirements of Government Code Section 65583.2(h), the City has identified a portion of Neighborhood D North (APNs 430-381-41 and 430-381-91) to be zoned as exclusively residential land use (see Figure 3-2, *Proposed Rezone*). These parcels would accommodate a minimum of 203 units. Therefore, the Project would include as part of the SPA, the designation of APNs 430-381-41 and 430-381-91 exclusively for residential land uses, such that nonresidential uses are prohibited. The remaining parcels, 430-381-38 and -95, would accommodate 352 dwelling units (*555* total units), which could be constructed as standalone residential or mixed-use projects.

In addition to the *555* units required for the City to meet their RHNA shortfall, 1,356 buffer units were allocated to Neighborhood D North. Buffer units were incorporated as contingency in the event that the City is unable to meet its RHNA obligation on other designated housing sites during the 2021-2029 Housing Element period. These units have been incorporated into the new proposed housing capacity under the TLSP SPA, providing a total residential maximum buildout of 1,911 units (*555* units + 1,356 buffer units).

Neighborhood D South/Planning Areas 13 & 14

Neighborhood D South (PA 13 &14) is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment. According to the approved TLSP, Neighborhood D South is designated to accommodate 1,672 residential units.

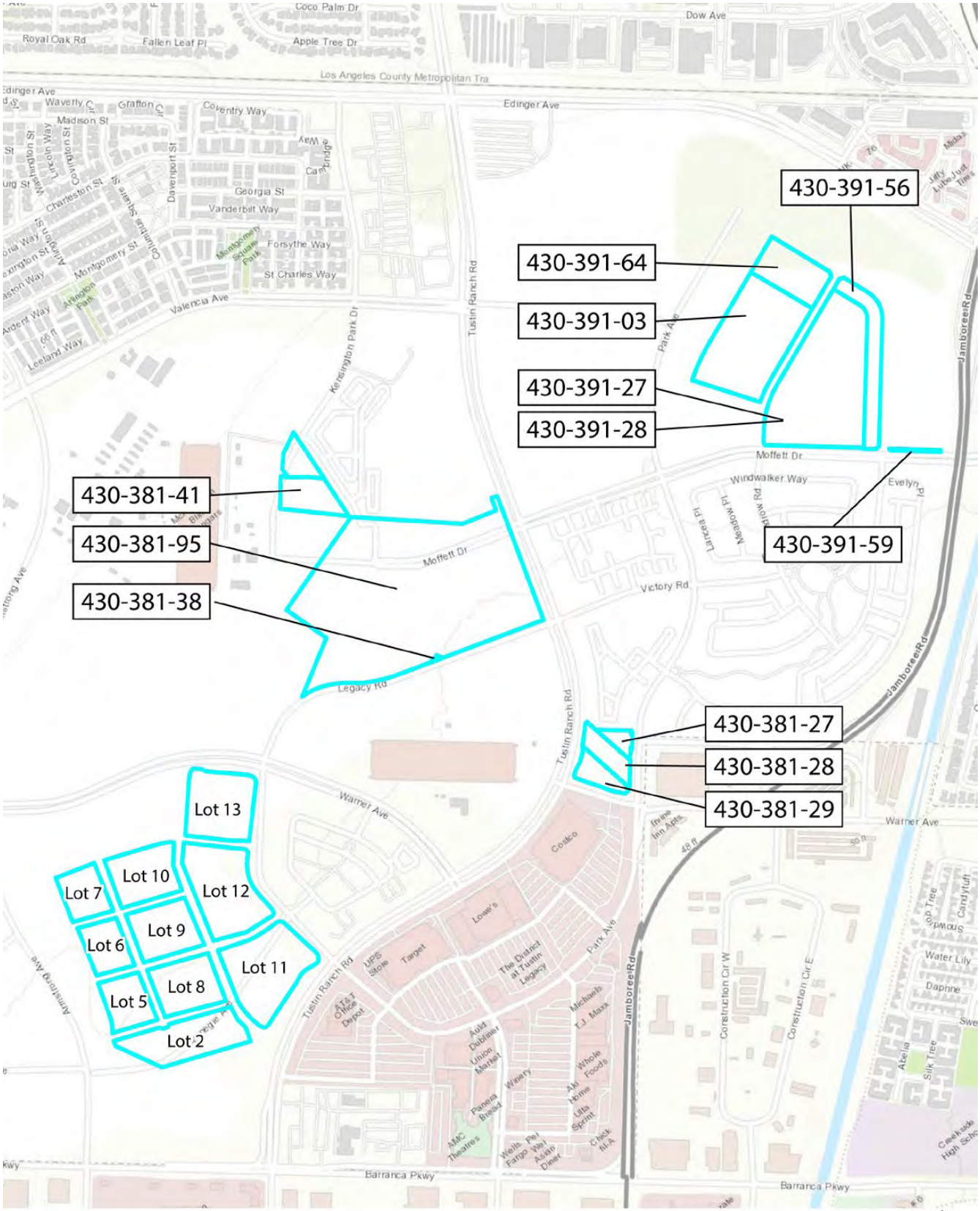
The portion of Neighborhood D South identified for increased housing capacity within the 2021-2029 Housing Element include South Brookfield Tract 18197, Lot 2 and Lots 5-13 (see Figure 3-1, *Housing Element Sites)*. The 2021-2029 Housing Element added 100 units to Neighborhood D South, increasing total residential capacity of Neighborhood D South to from 1,672 to 1,772.

Neighborhood G/Planning Area 15

Neighborhood G (PA 15) within the TLSP is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment, mixed-use transit-oriented development and residential uses. A maximum of 2,814 dwelling units and 1,095,200 square feet are the identified maximum capacities in Neighborhood G. The Mixed-Use Transit designation provides flexibility for residential, office, commercial retail, and commercial service uses in a vertical or horizontal configuration. This Planning Area also contains a portion of the Tustin Legacy Park Overlay.

The portion of Neighborhood G identified for increased housing capacity within the 2021-2029 Housing Element include APNs 430-381-27 to -29, 430-391-03, -27, -28, -56, -59 to -64 (see Figure 3-1, *Housing Element Sites)*. The Modified Project would add 200 dwelling units to Neighborhood G buildout, increasing the capacity from 2,814 to 3,014 residential units.

2021-2029 Housing Element Sites



2021-2029 Housing Element Sites

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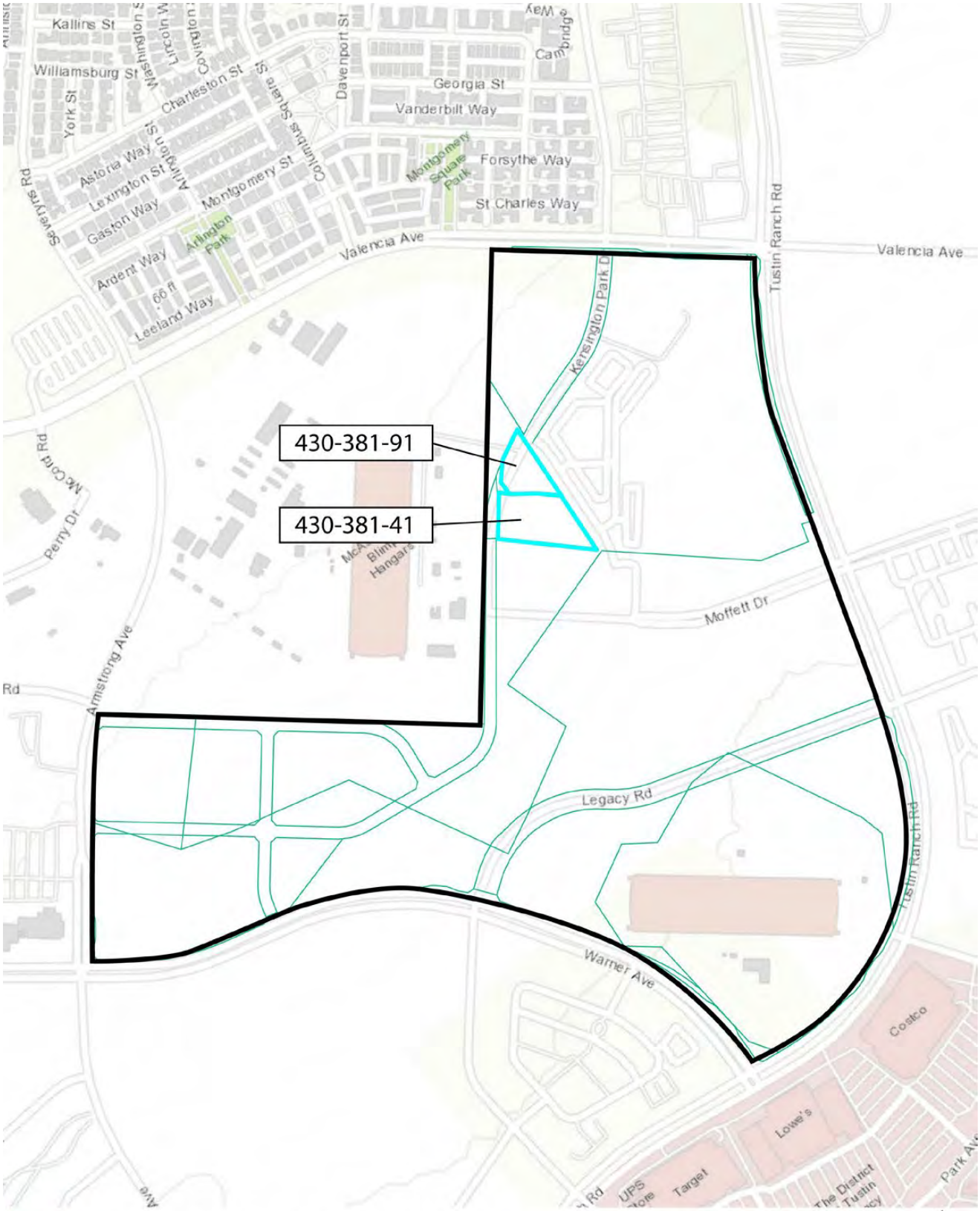
Proposed Rezone



Tustin Legacy Specific Plan
City of Tustin

Figure 3-2

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Nonresidential Uses of TLSP

In addition to the proposed changes above, the TLSP would be amended to reflect updates to nonresidential development by land use type. These changes have been made due to a series of factors, including entitled/built projects, forecasted market conditions, and anticipated future development. Overall, the changes amongst the various nonresidential land uses would result in a balanced condition (see Table 3-2 below).

Specific Plan Buildout

Individual sites, or neighborhoods, within the TLSP do not have minimum or maximum densities; however, there is a development cap on the number of housing units in each of the neighborhoods.

The current 2017 TLSP identifies a total capacity of 6,813 residential units and 9,532,419 SF of nonresidential capacity within the entire TLSP area (see *Table 3-1, Specific Plan Amendment Summary*). The proposed TLSP SPA identifies a total capacity of 9,024 residential units and 9,532,419 SF of nonresidential capacity within the TLSP area (see *Table 3-1, Specific Plan Amendment Summary*).

More specifically, within the Modified Project area (neighborhoods D and G), the 2017 TLSP identifies a total of 4,486 residential units and 3,248,890 SF of nonresidential capacity (see *Table 3-2, Comparison of Approved Project to Modified Project*). The proposed Modified Project identifies a total capacity of 6,697 residential units and 3,249,500 SF of nonresidential capacity(see *Table 3-1, Specific Plan Amendment Summary*).

While the SPA would increase the residential capacity by 2,211 units, the provision for density bonuses under State law is appliable to the Modified Project site as well. If existing density bonuses are applied to the proposed residential capacity under the SPA, an additional 2,759 units would need to be accommodated. As a result, the proposed allowed residential capacity increase of 2,211 and the potential of 2,759 density bonus units, for a total of 4,970 units, will be conservatively analyzed throughout the environmental documentation for the Project.

Changes in residential and nonresidential development capacity between the Approved Project and proposed Modified Project are captured in *Table 3-2, Comparison of Approved Project to Modified Project*. Although a specific development project is not proposed as part of the Project, for analysis purposes, the Project buildout year is assumed to be 2045.

Table 3-1: Specific Plan Amendment Summary

PA	LAND USE	SPECIFIC PLAN ACRES	ADOPTED SPECIFIC PLAN		PROPOSED AMENDED SPECIFIC PLAN		DIFFERENCE (PROPOSED – CURRENT)	BUILT/APPROVED		REMAINING	
			MAX RESIDENTIAL UNITS	MAX NON-RESIDENTIAL SQ. FT.	MAX RESIDENTIAL UNITS	MAX NON-RESIDENTIAL SQ. FT.		RESIDENTIAL	NON-RESIDENTIAL	RESIDENTIAL	NON-RESIDENTIAL
1	Education Village	120	-	2,254,200	-	2,254,200	No Change	-	210,564	-	2,043,636
2	Community Park	29	-	1,000	-	1,000	No Change	-	2,000	-	(1,000)
3	Transitional/ Emergency Housing	5	-	387 133,294	-	387 133,294	No Change	-	387 133,294	0	0
4–5	Residential	106	895	-	895	-	No Change	895	-	0	0
6	Regional Park	85	-	574,992	-	574,992	No Change	-	-	-	574,992
7	Commercial	21	-	248,292	-	248,292	No Change	-	248,292	-	0
8[3](D North)	Recreation/ Entertainment Core	190	-	1,547,690	1,911	1,547,690	1,911 DU No Change Sq. Ft.	-	-	1,911	1,547,690
9–12	Commercial/ Business	117	-	1,588,198	-	1,588,198	No Change	-	385,937	-	1,202,225
13-14 (D South)	Mixed-Use Urban	124	1,672	606,000	1,772	606,000	100 DU No Change Sq. Ft.	776	-	996	606,000
15 (G)	Mixed-Use Transit	271	2,814	[6] 1,095,200	3,014	1,095,200	200 DU No Change Sq. Ft.	785	-	2,229	1,095,200
16–19	Commercial	103	-	1,483,553	-	1,483,553	No Change	-	1,016,000	-	467,553
20	Residential	29	376	-	376	-	No Change	376	-	0	
21	Residential	127	654	-	654	-	No Change	654	-	0	
22	Residential	73	402	-	402	-	No Change	**402**	-	**0**	
	ROW	**206**					**-**			**0**	
	TOTAL	**1,606**	**6,813**	**9,532,419**	**9,024**	**9,532,419**	**2,212 DU** **(1,755,306) Sq. Ft.**	**3,888**	**1,996,087**	**5,136**	**7,536,296**

Table 3-2: Comparison of Approved Project to Modified Project

Land Use	Unit	Neighborhood D South (PA 13 & 14)		Neighborhood D North (PA 8)		Neighborhood G (PA 15)		Approved Total	Proposed Total	Modified Project - Approved Project
		Approved Project[1]	Modified Project	Approved Project[1]	Modified Project[2]	Approved Project[1]	Modified Project			
Single Family Housing	DU	-	117	-	-	-	692	-	809	809
Multi-Family Housing	DU	1,672	1,655	-	1,911	2,814	2,322	4,486	5,888	1,402
Hotel	SF	165,600	36,000	-	36,000	-	-	165,600	72,000	(93,600)
Neighborhood Commercial	SF	-	-	-	-	95,200	-	95,200	-	(95,200)
Community Commercial	SF	20,400	10,000	1,547,690	1,038,690	-	36,500	1,568,090	1,085,190	(482,900)
Office	SF	420,000	443,000	-	473,000	-	704,700	420,000	1,620,700	1,200,700
Continuing Care - Senior Housing	SF	-	117,000	-	-	1,000,000	354,000	1,000,000	471,000	(529,000)
High School	STU	-	-	1,784	1,784	-	-	1,784	1,784	-
Park - Legacy Park (Passive)	AC	6	6	54	54	31	31	91.0	91.0	-
Park - Sports Park (Active)	AC	-	-	45	45	-	-	45.0	45.0	-
Total Residential	**DU**	**1,672**	**1,772**	**-**	**1,911**	**2,814**	**3,014**	**4,486**	**6,697**	**2,211**
Total Nonresidential[5]	**SF**	**606,000**	**606,000**	**1,547,690**	**1,547,690**	**1,095,200**	**1,095,200**	**3,248,890**	**3,248,890**	**-**
Density Bonus		-	655	-	956	-	1,148	-	2,759	2,759
Potential Residential Buildout w/ Density Bonus		**1,672**	**2,427**	**-**	**2,867**	**2,814**	**4,162**	**4,486**	**9,456**	**4,970**

[1]Approved Project refers to the 2017 Specific Plan Amendment to the TLSP.
[2] Neighborhood D North includes 1,356 buffer units.

3.2 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (Title14 California Code of Regulations [CCR]) requires "A statement of objectives sought by the proposed project. A clearly written statement of objectives would help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and would aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project." The proposed TLSP amendment outlines a variety of "Guiding Principles" and related Goals that form the Project Objectives of the Project, including the following:

- Implement Program 1.1a of the 6th Cycle 2021-2029 Housing Element to provide for the opportunity for future residential development on three sites in the TLSP as identified by the HEU Sites Inventory, with a minimum density of 20 units per acre (du/acre) on the selected sites.
- Reposition the remaining undeveloped lands in Planning Areas 8, 13, 14 & 15 to allow increased capacity for residential development and to accommodate various levels of affordability.

3.3 DISCRETIONARY ACTION CHECKLIST

The City of Tustin has primary approval responsibility for the Project. As such, the City serves as the lead agency for this DSEIR pursuant to CEQA Guidelines §15050. The Tustin Planning Commission will evaluate this DSEIR and the TLSP Amendment and make a recommendation to the City Council whether the TLSP Amendment should be adopted and the DSEIR be certified. The City Council is the decision-making authority for the Project and will consider the Project along with the Planning Commission's recommendation, the information in the DSEIR and the Project's administrative record. The City Council will make a final decision to approve, approve with changes, or deny the Project. In the event of approval of the Project and certification of the DSEIR, the City would later conduct administrative and discretionary reviews and grant ministerial and discretionary permits and approvals to implement Project requirements, conditions of approval, mitigation measures and future developments on the Projects sites. Approval and implementation of the TLSP Amendment requires City approval of the following discretionary actions:

City of Tustin

- Certification of the SEIR.
- Adoption of the TLSP amendment to increase the allowed units in Neighborhood D and a portion of Neighborhood G.
- Adoption of Objective Design Standards for TLSP land use designations.

Potential future discretionary actions including, but not limited to:

- Exclusive Negotiating Agreements (ENAs).
- Disposition and Development Agreements.
- Residential Density Bonuses.
- Development Agreements.

As part of the proposed Project, subsequent approvals are anticipated to be requested from following responsible agencies:

- Airport Land Use Commission.
- Tustin Unified School District.
- Santa Ana Unified School District (potentially; portion of Neighborhood D South)
- South Orange County Community College District.
- Approval of the Water Supply Assessment from Irvine Ranch Water District.

4 ENVIRONMENTAL CHECKLIST

4.1 BACKGROUND

Project Title: TLSP Amendment
Lead Agency: City of Tustin
Lead Agency Contact: Samantha Brier, Senior Planner
Project Location: Tustin Legacy Specific Plan (TLSP) area; bounded by Edinger Ave., Harvard Ave., Barranca Pkwy, and Red Hill Ave.
Project Sponsor's Name and Address: City of Tustin, 300 Centennial Way, Tustin, CA 92780
General Plan and Zoning Designation: The Project site has a General Plan land use designation of TLSP (TLSP) and a zoning designation of SP 1 – Tustin Legacy, as shown in Figure 2-4, *Existing General Plan Land Use* and Figure 2-5*, Existing Zoning*.
Project Description: The proposed Project is a Specific Plan Amendment (SPA) to the TLSP, which would amend Neighborhoods D North, D South, and G of the TLSP to accommodate additional units as shown in Table 3-1, which would implement Program 1.1a of the 2021-2029 Housing Element Update (HEU). The Project proposes upzoning the Project sites to add a total of 855 additional residential units to the existing residential unit cap for the TLSP. This includes the rezoning of 3.7 acres of property exclusively for residential use, to accommodate 203 potential dwelling units for lower income households. The SPA would also include 1,356 buffer units within Neighborhood D North, which are intended to accommodate identified housing element units that are not developed on the other HEU sites. Altogether, the HEU sites and the buffer units total an additional 2,211 units that would be added to the existing capacity of the TLSP. The environmental analysis prepared for the TLSP amendment will also consider density bonus units authorized under State density bonus law, which has the potential of facilitating 2,759 additional units. Therefore, a total of 4,970 units will be analyzed in the DSEIR.
Surrounding Land Uses and Setting: Northwest (Tustin) — Red Hill Avenue, business commercial, warehousing, & offices Northeast (Tustin) — Metrolink train tracks/station, Como Channel (stormwater), Tustin Meadows & Peppertree Residential Communities (SFR), warehousing, & offices Southwest (Irvine) — Restaurants, retail, offices, & storage Southeast (Irvine) — Tustin Field Residential Community (MFR & SFR), OC Succulents Nursery, Creekside Education Center, parkland, & Columbus Grove Residential Community (SFR)
Other Public Agencies Whose Approval is Required: South Orange County Community College District, Airport Land Use Commission, Tustin Unified School District, Santa Ana Unified School District, and Approval of the Water Supply Assessment from Irvine Ranch Water District.

4.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The subject areas checked below were determined to be new significant environmental effects or to be previously identified effects that have a substantial increase in severity either due to a change in project, change in circumstances or new information of substantial importance, as indicated by the checklist and discussion on the following pages.

☐	Aesthetics	☐	Agriculture/Forestry Resources	☒	Air Quality
☐	Biological Resources	☐	Cultural Resources	☒	Energy
☐	Geology/Soils	☒	Greenhouse Gas Emissions	☐	Hazards/Hazardous Materials
☒	Hydrology/Water Quality	☒	Land Use/Planning	☐	Mineral Resources
☒	Noise	☒	Population/Housing	☒	Public Services
☐	Recreation	☒	Transportation	☒	Tribal Cultural Resources
☒	Utilities and Service Systems	☐	Wildfire	☒	Mandatory Findings of Significances

4.3 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARACTION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☒ I find that the proposed project MAY have a "potentially significant" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier analysis pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Justina Willkom, Community Development Director	City of Tustin

4.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including offsite as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below, may be cross-referenced).
5. Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Guidelines Section 15063 (c)(3)(d). In this case, a brief discussion should identify the following:

    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

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5 ENVIRONMENTAL ANALYSIS

This section provides evidence to substantiate the conclusions in the environmental checklist.

5.1 AESTHETICS

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	☐
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒	☐

Prior Environmental Findings

The certified FEIS/EIR evaluated views of the TLSP area from the surrounding viewshed and determined that development would alter the appearance of the area to varying degrees, including the Project area as seen from the surrounding viewshed and views from within the TLSP. Development would create visual contrast between new development and existing scattered buildings, hardscape, and vacant land in various portions of the Project area over the approximately 20-year development duration. However, the FEIS/EIR determined that the only significant visual impact identified in the FEIS/EIR was the potential loss of the existing blimp hangars, which would change existing foreground, middle-ground, and background views.

At the time the FEIS/EIR was adopted Hangars 28 and 29 were listed on the National Register of Historic Places (NRHP); as the two hangars and some appurtenant structures had been determined eligible for listing as a National Historic District. Since the two hangars measured 178 feet high and 1,088 feet long, they were visible from several miles away. TLSP development could demolish both hangars and the other appurtenant structures and improvements that are elements contributing to eligibility for National Historic District listing. The loss of both hangars was identified as a significant and unavoidable visual impact. In accordance with Section 106 of the National Historic Preservation Act, the City of Tustin, the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation, the Department of the Navy, and the County of Orange executed a Memorandum of Agreement that identified measures to mitigate the impacts of the destruction of portions of the eligible historic district, including the removal of Hangar 28 and Hangar 29 (RBF 2008). Pursuant to the agreement, the County of Orange conducted a marketing study of Hangar 28, and the City of Tustin conducted a marketing study of Hangar 29. Both jurisdictions

reached the conclusion that there is no economically viable use for the hangars, requiring implementation of mitigation measures.

Measures intended to mitigate the loss of the hangers as iconic features were identified in the Memorandum of Agreement associated with the TLSP, include requirements for a written history, documentary video, and exhibit. As discussed under Subsection 5.5.1, *Cultural Resources*, of the 2017 SEIR Initial Study, all mitigation measures identified in Stipulation III of the agreement have been satisfied.

Aesthetic impacts were then subsequently analyzed within the following previously approved CEQA documents:

The 2004 Supplemental EIR determined that if one hangar were retained, impacts to aesthetic resources would be less than significant; and impacts would remain significant and unavoidable if both hangars were demolished.

The 2006 Addendum concluded that although views from previously identified sensitive viewers were altered with the new development, the development was implemented in compliance with the MCAS Specific Plan development standards and design guidelines. The new development was visually consistent with existing residential development.

The 2013 Addendum found that there would be no new impacts related to aesthetics. It determined that although there would be an increase in floor area ratio (FAR), the land uses would be the same as previously analyzed and would not change building height restrictions, setbacks, signage, and other development standards.

The 2017 SEIR analyzed potential impacts that could result from the proposed increase of 2,212 residential units and a decrease of 1.7 million square feet of nonresidential land uses. As identified in the 2017 SEIR Initial Study, the change in land use mix and associated building types would alter the visual appearance of the Project area but would not result in a change in effect on a scenic vista.

As described above, the FEIS/EIR concluded that demolition of both historic hangars would have a significant visual impact, while the loss of only one hangar would be less than significant. The 2017 SEIR Initial Study determined that the proposed changes in land use under the 2017 TLSP SPA would not result in changes to the analysis and conclusions from the FEIS/EIR with respect to the hangars.

The proposed land use changes as part of the identified aesthetic impacts of the Approved Project as less than significant with no changes or new information requiring preparation of an EIR.

Current Conditions

According to the California Department of Transportation (Caltrans) Scenic Highway Map, the City of Tustin does not contain any scenic highways within or surrounding the City (California Department of Transportation, 2018). The nearest state scenic highway is Route 91 in the City of Orange, approximately 8.5 miles to the north. According to the County of Orange General Plan, there are no designated scenic roadways or scenic vistas in the Project vicinity (County of Orange, 2005).

Several developments within the Project site (Neighborhoods D and G) have been completed since certification of the Approved Project consistent with the approved CEQA analysis prepared. The first phase of a 40-acre middle school and high school, Legacy Magnet Academy, at the southwest corner of Tustin Ranch Road and Valencia Avenue in Neighborhood D (North) was completed in 2020. The Landing (Brookfield development) is a 400-unit above-moderate-income development within Neighborhood D South that was entitled in 2022 and is currently under construction. The project is currently under construction. Additionally, Alley Grove Promenade is currently under construction directly south of The Landing. The Alley

Grove Promenade project is an approximately 2.8-acre open space pedestrian walkway/multimodal connection from Armstrong Avenue to Tustin Ranch Road through Neighborhood D South at Tustin Legacy.

CalAtlantic Homes developed Levity at Tustin Legacy, a 218-unit above-moderate-income development within Neighborhood G. Project was entitled in 2018 and has since been completed.

On November 7, 2023, a fire erupted in Navy Hangar 28. The Navy hangar was completely destroyed, and as of the date of this initial study, it is undergoing demolition and removal. An investigation to determine the cause of the fire is currently underway. Notably, the fire was contained to Navy Hangar 28, such that Navy Hangar 29 was not impacted, and remains unaltered.

2017 SEIR Measures Applicable to the Proposed Project

MM Vis-1 An urban design plan shall be adopted to provide for distinct and cohesive architectural and landscape design, features, and treatments, and harmony with existing adjacent landscape.

a) Have a substantial adverse effect on a scenic vista?

Impacts Associated with the Modified Project

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view or visual setting. A scenic vista can be impacted in two ways: a development project can have visual impacts by either directly diminishing the scenic quality of the vista or by blocking the view corridors or "vista" of the scenic resource. Important factors in determining whether a proposed project would block scenic vistas include the project's proposed height, mass, and location relative to surrounding land uses and travel corridors.

The change in land use mix and associated building types would alter the visual appearance of the Project site but would not result in a change in effect on a scenic vista. No new significant impacts would occur. The proposed Project is an amendment to the TLSP, which would amend PAs 8, 13, 14 and 15 of the TLSP to accommodate a total of 4,970 additional units within Neighborhoods D South, D North, and G. The intensification in residential density of the area could slightly alter the visual appearance of the Project site but would not result in a change in effect on a scenic vista. No new significant impacts would occur. Therefore, this topic will not be carried forward in the SEIR.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Project site is not within the vicinity of a designated state scenic highway. The nearest designated state scenic highway to the site is State Route 91 (SR-91), about 8.5 miles to the north (California Department of Transportation, 2018). Implementation of the TLSP Amendment would not impact scenic resources in a state scenic highway. Therefore, this topic will not be carried forward in the SEIR.

c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly

accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The proposed Project is an amendment to the TLSP, which would amend PAs 8, 13, 14 and 15 of the TLSP to accommodate additional units within Neighborhoods D South, D North, and G. The Project proposes upzoning Neighborhood D South by 100 units from the existing 1,296-unit capacity to 1,396-unit capacity; and Neighborhood G by 200 units from the existing 2,029-unit capacity to 2,229-unit capacity. Additionally, the Project would add capacity for 555 residential units to Neighborhood D North, which currently is planned exclusively for nonresidential land uses. Pursuant to the City's adopted Housing Element, the TLSP will also include 1,356 buffer units in Neighborhood D North, which are intended to make up for any potential units that not developed on the other HEU sites. Together, the HEU sites and buffer units equate to an additional 2,211 units. Additionally, because the Project site is subject to the Surplus Land Act, a density bonus of up to 50 percent is allowed under certain conditions. Therefore, a total of 4,970 units were analyzed for potential buildout under Neighborhood D South, D North, and G, respectively.

The intensification in residential density of the area could slightly alter the visual appearance of the Project site. However, future development would follow existing development standards and design guidelines, including building height requirements, setbacks, and signage that represent the change in land uses, while maintaining or enhancing the character of the TLSP area. The proposed TLSP SPA would not significantly alter allowable heights in the Project site such that it would degrade the quality or character of the site. For example, the Adopted TLSP allows heights of up to 150 feet in Planning Areas 8 and 13-14 with some exceptions allowing up to 180 feet; the TLSP Amendment would not increase allowable building heights beyond these limits. Further, the Specific Plan Amendment would be required to comply with Mitigation Measure Vis-1 from the certified FEIS/EIR, which required an urban design plan to provide for distinct and cohesive architectural and landscape design as well as harmony with adjacent landscaping. The urban design plan required under Mitigation Measure Vis-1 would require updating in response to modifications to the land use plan proposed in the TLSP Amendment. No new significant impacts would occur. Therefore, this topic will not be carried forward in the SEIR.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Spill light occurs when lighting fixtures such as streetlights, parking lot lighting, exterior building lighting, and landscape lighting are not properly aimed or shielded to direct light to the desired location and light escapes and partially illuminates a surrounding location. Sensitive uses (e.g., residential uses) surrounding the Project site could be impacted by the light from development within the boundaries of the Project site if light spill occurs.

Glare is the result of improperly aimed or blocked lighting sources that are visible against a dark background such as the night sky. Glare may also refer to the sensation experienced looking into an excessively bright light source that causes a reduction in the ability to see or causes discomfort. Glare generally does not result in illumination of off-site locations but results in a visible source of light viewable from a distance. Glare could also occur from building materials of the new structures, including glass and other reflective materials.

The intensification in residential density of the area could slightly alter the visual appearance of the Project site. However, consistent with the conclusions in the FEIS/EIR, residential lighting would be similar to light sources associated with the existing commercial, industrial, and residential uses adjacent to the Project site. Additionally, lighting added onsite by implementation of the TLSP Amendment would only be visible from close range due to the flat topography of the site and structures on and surrounding the site. No new significant lighting impacts would occur. Therefore, this topic will not be carried forward in the SEIR.

5.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☐	☒

Prior Environmental Findings

The certified FEIS/EIR identified 702 acres of Important Farmland onsite: 682 acres of Prime Farmland and 20 acres of Farmland of Statewide Importance. In 1999, 530 acres were leased for cultivation with row crops and citrus. Conversion of farmland to nonagricultural uses was identified as a significant and unavoidable impact in the FEIS/EIR. No substantial change to the previous analysis was identified in the 2004 Supplemental EIR, 2006 Addendum, 2013 Addendum, or 2017 Subsequent EIR.

Current Conditions

The Project site does not contain any designated important farmland. Since certification of the FEIS/EIR, all agricultural activities have ceased. The current California Department of Conservation's Farmland Mapping and Monitoring (FMMP), published August 2011, has been updated to reflect the absence of agricultural activities. The TLSP area is mapped as "Urban and Built-Up Land" and "Other Land." Additionally, no land is designated for forest land, timberland, or timberland production within the Project site.

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The State of California Department of Conservation's Farmland Mapping and Monitoring Program is charged with producing maps for analyzing impacts on the state's agricultural resources. California's agricultural lands are rated based on soil quality and irrigation status. For CEQA purposes, the following categories qualify as "agricultural land": Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. Per Section 21060.1 of the State CEQA Guidelines, Farmland of Local Importance and Grazing Land are not considered Farmland.

Although the prior environmental findings identified farmland within the TLSP area, there are currently no farmland or agricultural activities on the Project site. No prime farmland, farmland of statewide importance, or unique farmland is mapped within the Project site on the California Important Farmland Finder maintained by the Division of Land Resource Protection (California Department of Conservation, 2018). The Project would not convert mapped important farmland to nonagricultural uses, and no impact would occur. Additionally, no change from the previous analysis is required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Williamson Act (California Land Conservation Act of 1965) restricts the use of agricultural and open space lands to farming and ranching by enabling local governments to contract with private landowners for indefinite terms in exchange for reduced property tax assessments.

As noted above, there are currently no agricultural uses within the Project site. Additionally, as noted in the 2017 SEIR, there are no Williamson Act contracts in effect on the proposed Project site. No impact would occur. No change from the previous analysis is required.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. "Forest land" is defined as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." "Timberland" is defined as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees." "Timberland Production Zone" (TPZ) is defined as "an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h)."

Land onsite is zoned for the TLSP, which allows for development of a mix of residential, commercial, recreational, and institutional land uses. As noted above, land within the Project site is not designated for forest land, timberland, or timberland production on the Project site. No impact would occur and no change from the previous analysis is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project site is disturbed and partially developed (see Figure 2-3, *Aerial*). According to the U.S. Geological Survey (USGS) National Land Cover Database Map (2021), the Project site does not contain cover consistent with classification for forest land and is primarily shrub/scrub and developed land cover (U.S. Geological Survey, 2023). Therefore, no impact would occur and no change from the previous analysis is required.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The Project site does not contain agricultural or forest land. The Project site is surrounded by built-out urban uses in Irvine and Tustin. There is no mapped important farmland near the site, and implementation of the Project would not indirectly cause conversion of mapped important farmland to nonagricultural uses or the conversion of forest land to non-forest use. No impact would occur and no change from the previous analysis is required.

5.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒	☐

Prior Environmental Findings

The certified FEIS/EIR addressed consistency of the MCAS Specific Plan with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plans (AQMPs), construction-related emissions, operational emissions, localized carbon monoxide (CO) "hotspots," and air toxics. The FEIS/EIR concluded that the MCAS Tustin Specific Plan would not be consistent with the 1994 and 1997 AQMPs because these plans did not consider the planned intensity assumed by the Specific Plan. This impact was significant and unavoidable, and a statement of overriding considerations was adopted.

The FEIS/EIR concluded that there were significant and unavoidable construction-related (short-term) emissions that exceeded the SCAQMD thresholds. Even with incorporation of mitigation measures, impacts were determined to remain significant and a statement of overriding considerations was adopted.

Operational emissions were also considered significant and unavoidable even with implementation of the City's Traffic Reduction/Traffic Demand Management program (Ordinance No. 1062, approved in 1991), which has policies to reduce long-term emissions. A statement of overriding considerations was adopted for this impact. However, the FEIS/EIR concluded that operational emissions from businesses would comply with SCAQMD's regulations for operation and would be less than significant.

The FEIS/EIR concluded that no sensitive receptors would be exposed to CO hotspots. The analysis included intersections with the highest traffic volumes and LOS during the years 2005 and 2020.

Air quality impacts were then subsequently analyzed within the following previously approved CEQA documents:

The 2004 Supplemental EIR determined that the project would not result in new additional impacts and the implementation of Tustin Ranch Road would be consistent with applicable policies and would reduce overall CO Hotspot impacts. However, the impact of the Approved Project on air quality would remain significant and unavoidable.

The 2006 Addendum concluded that there was no substantial change and a reduced impact due to the reduction of nonresidential square footage and redistribution of residential uses. The project incorporated

all applicable mitigation measures and revised MM AQ-1 to reflect amendments to Rules 402 and 403. No new impacts were identified.
The 2013 Addendum analyzed a specific project and updated the air quality analysis to identify construction and operational related impacts resulting from the construction of up to 816,929 square feet of academic office space and the extension of Bell Avenue. Based on this analysis it was determined that SCAQMD thresholds would not be exceeded, and no new significant impacts would occur.

Because the 2016 Air Quality Management Plan (AQMP) was being drafted at the time that the 2017 SEIR was released, the thresholds in the 2017 SEIR were based on the adopted 2012 AQMP. The 2017 SEIR found that the 2017 TLSP SPA would accommodate more dwelling units, and the growth associated with these additional residential land uses is accounted for in the 2012 AQMP (2017 Draft SEIR, p. 5.1-19). Therefore, similar to the Adopted Specific Plan, the 2017 TLSP SPA was determined to be inconsistent with the 2012 AQMP.

Compared to the Adopted Specific Plan as quantified using CalEEMod, the 2017 SPA was determined to result in an increase in VOC, CO, SO_X, PM_{10}, and $PM_{2.5}$ air pollutant emissions (2017 Draft SEIR, p. 5.1-20). However, the net change in emissions would not exceed SCAQMD's regional significance thresholds for construction emissions. Therefore, there would not be a substantial increase in the severity of previously identified impacts regarding construction emissions.

The total emissions associated with implementation of the project were identified to exceed the SCAQMD operation-related regional significance thresholds for all of the criteria air pollutants except for SO_2 (2017 Draft SEIR, p. 5.1-20). This result is similar to the total long-term emissions associated with the Adopted Specific Plan. However, implementation of the project was found to result in reduced emissions for NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ when compared to the Adopted Specific Plan, due to an anticipated decrease in vehicle trips associated with the 2017 TLSP SPA.

Findings of the 2017 SEIR anticipated that the Modified Project and Adopted Specific Plan would generate similar localized construction-related emissions and would both result in a significant localized construction-related emissions impacts (2017 Draft SEIR, p. 5.1-24). Therefore, no new significant impacts would occur.

The Initial Study prepared for the 2017 SEIR determined that the proposed change in land use mix from nonresidential to residential would not generate a substantial increase in odor generation and no new impacts on objectionable odors would occur (Placeworks, 2015, p. A-50). However, the project would accommodate more dwelling units, and the growth associated with these additional residential land uses is accounted for in the 2012 AQMP. Therefore, similar to the Adopted Specific Plan, the project was determined inconsistent with the 2012 AQMP and impacts were determined to be significant and unavoidable.

Current Conditions

The TLSP area continues to be within the South Coast Air Basin (SCAB) under the jurisdiction of the SCAQMD and California Air Resources Board (CARB). Since certification of the FEIS/EIR and subsequent analyses, there have been several changes to the regulatory environment. On October 1, 2015, the U.S. Environmental Protection Agency (EPA) strengthened the National Ambient Air Quality Standards (NAAQS) for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb). The South Coast Air Basin is classified as an "extreme" nonattainment area and the Coachella Valley is classified as a "severe-15" nonattainment area for the 2015 Ozone NAAQS. The 2022 AQMP was developed to address the requirements for meeting this standard and was adopted December 2, 2022, by the South Coast AQMD Governing Board. Additionally, a newer version (version 2020.4.0) of the California Emissions Estimator Model (CalEEMod) was released that has updated emissions factors, therefore the emissions calculated for the Adopted TLSP used a version of the model that is currently outdated.

The existing conditions in the Project area have changed since the FEIS/EIR. This analysis will update the environmental conditions based on the most current air quality data.

a) Conflict with or obstruct implementation of the applicable air quality plan?

Change in Project Requiring EIR Revisions. As stated above, several updates to the AQMP have occurred since the FEIS/EIR was certified. Although the overall intensity of development in the TLSP area would remain the same, the Project would increase residential units, which may cause population to exceed current growth projections for the area. This increase in population and the consistency of the Project's regional emissions with the current 2016 AQMP would need to be evaluated in the SEIR.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Change in Project Requiring EIR Revisions. The Project would increase residential uses and maintain nonresidential uses. There would be changes in air quality emissions based on the addition of residential units and on the new and updated air quality model with updated emissions factors. As part of the SEIR, an air quality technical analysis will be prepared to determine the change in short-term and long-term criteria air pollutant emissions from the Project. CalEEMod will be used to model criteria air pollutant emissions from the Approved Project and the proposed Project at buildout. The criteria for air pollutant emissions analysis will be based on the average daily trip generation and/or vehicle miles traveled (VMT) for the Approved Project and the TLSP Amendment. The SEIR will compare the net increase in emissions at buildout to SCAQMD's regional significance thresholds and determine if there are any new significant impacts or mitigation measures required. Therefore, this topic will be carried forward in the SEIR.

c) Expose sensitive receptors to substantial pollutant concentrations?

Change in Project Requiring EIR Revisions. The Project would increase residential uses and maintain nonresidential uses. There would be changes in air quality emissions based on the addition of residential units and on the new and updated air quality model with updated emissions factors. The Project could result in increased operational emissions that could increase the exposure of sensitive receptors to pollutant concentrations. Detailed construction information would not be available at this program level of analysis. The SEIR will qualitatively analyze localized air pollution impacts from construction equipment exhaust and fugitive dust for their potential to elevate concentrations of air pollutants at the land uses surrounding the development sites. Mitigation measures to reduce potential impacts will be identified in the SEIR, as necessary. Therefore, this topic will be carried forward in the SEIR.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Initial Study prepared for the 2017 SEIS/EIR concluded that the TLSP would not generate objectionable odor and did not require further analysis. The proposed increase in residential units would not generate a substantial increase in odor generation. Residential uses may generate odors from backyard barbeque smoke, lawn mower exhaust, or application of exterior paints. The types and concentrations of odors generated would be typical of similar communities and the surrounding residential uses. The amount of nonresidential use would be maintained. Therefore, the Project impacts would be equivalent to previously identified odor generation from those uses. The Project would be consistent with Section 3.18.4 of the TLSP, which requires uses that produce odors, toxic gases, or noxious matter detectable outside the property lines of the premises to be modified to prevent such emissions.

5.4 BIOLOGICAL RESOURCES

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	☐

Prior Environmental Findings

The certified FEIS/EIR determined that implementation of the Specific Plan would result in impacts to jurisdictional waters and wetlands and to southwestern pond turtle. The FEIS/EIR did not find burrowing owls or suitable habitat for burrowing owls onsite. The FEIS/EIR identified several potential jurisdictional waters onsite, including but not limited to ditches and drainages, the Santa Ana/Santa Fe Channel, the Barranca Channel, and Peters Canyon Channel. It identified impacts to 16.2 acres of jurisdictional waters, 2.4 acres of which were vegetated wetlands. The FEIS/EIR determined that there would be no impacts to federally listed threatened or endangered plant or animal species. It found that there would be a direct impact to four loggerhead shrike, but that it would not have an overall adverse effect to the population in southern California. Mitigation Measures were included to require necessary Section 404 and 1601 permits for the impacts of jurisdictional waters; the capture and relocation of pond turtles to avoid impacts to wildlife; and the contribution of funds to create a relocation site for turtle habitat to mitigation impacts to sensitive

habitat in coordination with the California Fish and Game Commission (CFGC). Overall, impacts were determined to be less than significant with mitigation.

Subsequently, in the 2006 Addendum, impacts to biological resources were analyzed and several determinations and mitigation measures were revised.

Mitigation measures were required in the certified FEIS/EIR and revised in the 2006 Addendum; the aforementioned impacts are less than significant after implementation of mitigation. Note that a capture and relocation plan was approved by the California Department of Fish and Wildlife (CDFW) for the southwestern pond turtle, and all turtles have been relocated.

The 2006 Addendum, which covered 1,511 acres of the Project area in the City of Tustin, identified 0.68 acres of federally protected wetlands in that area. Mitigation measures for impacts to jurisdictional waters and wetlands were included in the FEIS/EIR and revised in the 2006 Addendum.

The 2006 Addendum also identified 0.8 acre of riparian area jurisdictional to CDFW onsite and concluded that development would result in a significant impact to that entire riparian area. Mitigation measures were identified in the FEIS/EIR that would reduce impacts to less than significant.

The 2006 Addendum concluded that the Specific Plan area does not support wildlife movement.

The 2017 SEIR Initial Study determined that proposed amendment at the time would not change the overall development footprint of the TLSP (Placeworks, 2015, p. 42). Implementation of the TLSP Amendment would not cause impacts to biological resources that were not previously analyzed in the FEIS/EIR. As noted above, the CDFW approved a pond turtle relocation and mitigation plan for the project, and all turtles have been relocated. Previously approved Mitigation Measures Bio-2, Bio-3, and Bio-4 would also be applicable to the Modified Project. Implementation of the Modified Project would not result in new impacts to any special status species or their habitats, and mitigation measures would reduce impacts to less than significant. The Initial Study determined that no new significant impacts on candidate, sensitive, or special status species would occur.

The 2017 SEIR Initial Study determined that development area for the TLSP Amendment would be the same as the Project area analyzed in the FEIS/EIR (Placeworks, 2015, p. 43). No new areas would be developed. According to the 2022 Annual Mitigation Monitoring Report (see Appendix C), the City has 401, 404, and 1602 permits that apply to the TLSP area. These permits and responsibilities would be assigned to subsequent developers as applications are submitted. With implementation of MM Bio-1, impacts to areas under the jurisdiction of CDFW and Waters of the US would be reduced to a less than significant impact. Future developers would be required to obtain permits from CDFW, the Regional Water Quality Control Board (RWQCB), and the US Army Corps of Engineers (Corps). This would not result in a significant change in the impact conclusions of the FEIS/EIR. The Initial Study determined that no new significant impacts on riparian habitat or federally protected wetlands would occur.

The 2017 SEIR Initial Study found that implementation of the 2017 TLSP SPA would not interfere substantially with wildlife movement and would not result in the removal of substantial amounts of trees or shrubs that could be used by nesting migratory birds protected under federal and state laws (Placeworks, 2015, p. 54). The Initial Study determined that no new significant impacts on riparian habitat or federally protected wetlands would occur.

Finally, the 2017 SEIR Initial Study determined that the project would not conflict with the NCCP/HCP or any other local policies or ordinances protecting biological species and no impact would occur.

Therefore, the 2017 SEIR determined that impacts to biological resources would be consistent with determinations made by previous CEQA documents and impacts to biological resources would be less than significant with previously approved mitigation measures Bio-1 through Bio-4.

2017 SEIR Measures Applicable to the Proposed Project

MM Bio-1 The project proponents of any development affecting jurisdictional waters of the U S or vegetated wetlands shall obtain Section 401, Section 404, Section 1602, and other certifications, approvals, and permits, as necessary. Copies of the necessary state and federal permits shall be provided to the City prior to the issuance of mass or grading permits for grading activities impacting jurisdictional areas. A replacement ratio for affected wetland resources shall be determined in consultation with regulatory agencies as part of the permitting process and shall be no less than 1:1 replacement of function and value. Additional criteria and requirements will be as follows:

- Create (establish), restore, or enhance wetland/riparian habitats on-site to the maximum extent practicable to minimize and replace the on-site loss of USACE and CDFG jurisdictional acreage and function, or off-site as may be permitted by the USACE and CDFG.
- To return jurisdictional habitats that are temporarily disturbed during construction to preconstruction conditions.
- To provide for maintenance, management and monitoring of the mitigation site or sites for a minimum of three years as determined through the permitting process.

MM Bio-2 Based on consultations with CDFG, City of Tustin, or a project proponent as applicable, an off-site relocation site for southwestern pond turtles captured on site shall be identified that is as close to the Reuse Plan area as possible and that is sustainable in perpetuity. (No appropriate habitat is available for relocation.) Potential relocation site include but are not limited to a turtle pod and relocation site located in upper Shady Canyon within the Orange County Nature Preserve; or the San Joaquin Marsh, which is managed by UC Irvine, Irvine Ranch, and the Orange County Water District. Some property owners and public agencies may be averse to the relocation of species of special concern onto their property or jurisdiction, and it would be speculative to identify actual sites prior to the completion of consultation with CDFG and potential property owners and/or appropriate public agencies. A relocation and mitigation plan shall be prepared by a qualified biologist for approval by the CDFG. The relocation and mitigation plan shall include the following:

- Requirement for focused surveys for southwestern pond turtles prior to construction activities and submittal of survey report to the CDFG.
- Identification of specific relocation site within the Newport Bay watershed.
- Methodology for trapping, capture, recordation and release of southwestern pond turtles.
- Requirement of biological monitoring during construction and requirement for capture and relocation by a qualified biologist of any additional southwestern pod turtles observed during construction.

MM Bio-3 Permits from the CDFG shall be obtained for live-capture of the turtles and for transporting them to the relocation site.

MM Bio-4 A project proponent shall negotiate with the CDFG or other agency for organization as appropriate, for relocation of turtles and/or contribution of funds to improve, restore, or

create a relocation site as turtle habitat, in conjunction with any regulatory permits necessary.

Current Conditions

As stated previously, many parts of the TLSP area are developed or currently under construction. Approximately 727 acres of the TLSP area are vacant: either undeveloped or remnants of the former military operation, such as unoccupied buildings, asphalt-paved streets and parking lots, concrete sidewalks and pads, and landscaping/groundcover. Vacant land on site has largely been graded and contains no native vegetation. Additionally, the TLSP area currently has a variety of public and private neighborhood parks in residential neighborhoods between both cities and the Veterans Sports Park, an approximately 30-acre community sports park, which was completed and opened in 2020.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Project would increase the cap for residential units within Neighborhoods D South and G, and revise land uses in Neighborhood D North to allow for 1,911 residential units in an area previously planned for nonresidential land uses. Although the Project would allow for intensification of density, the Project would not change the overall development footprint of the TLSP. Portions of the vacant land identified as nonnative grassland in the FEIS/EIR have subsequently been developed and the entire Project area has been graded. An updated Biological Records Search was conducted for the Project, and included as Appendix A.

Implementation of the Project would not cause impacts to biological resources, as no development is proposed. Mitigation Measures Bio-2, Bio-3, and Bio-4 would be applicable to the Modified Project. As previously stated, CDFW approved a pond turtle relocation and mitigation plan for the Approved Project, and all turtles have been relocated. Implementation of the Project would not result in new impacts to any special status species or their habitats. The Project would allow the development of future housing by-right on various parcels within the Project site if certain conditions are met, and therefore, additional CEQA documentation would not need to be conducted. Therefore, Mitigation Measure Bio-5 has been included to require updated surveys at the time of future development to confirm site conditions are consistent with previous findings and additional impacts wouldn't occur as a result of the project. No impact would occur and no change from the previous analysis is required. Therefore, this topic will not be carried forward in the SEIR.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The jurisdictional delineation conducted for the FEIS/EIR identified Waters of the US and wetlands protected under the federal Clean Water Act; but not Waters of the State or riparian habitats jurisdictional to CDFW. The 2006 Addendum identified 0.8 acres of riparian habitat. The development area for the TLSP Amendment would be the same as the Project area analyzed in the Approved Project. No new areas would be developed. With implementation of MM Bio-1, impacts to areas under the jurisdiction of CDFW and Waters of the US would be reduced to a less than significant impact. Future developers would be required to obtain permits from CDFW, the Regional Water Quality Control Board (RWQCB), and the US Army Corps of Engineers (Corps). This would not result in a significant change in impact conclusions of the 2017 SEIR. No sensitive natural communities have been identified onsite in previous environmental documentation and no new sensitive natural communities have been identified through a biological record search. No impact would

occur and no change from the previous analysis is required. Therefore, this topic will not be carried forward in the SEIR.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The development area for the TLSP Amendment would be the same as the Project area analyzed in the FEIS/EIR. No new areas would be developed. According to the 2022 Annual Mitigation Monitoring Report (see Appendix C), the City has 401, 404, and 1602 permits which apply to the Project area. These permits and responsibilities would be assigned to subsequent developers as applications are submitted. With implementation of MM Bio-1, impacts to areas under the jurisdiction of CDFW and Waters of the US would be reduced to a less than significant impact. Future developers would be required to obtain permits from CDFW, RWQCB, and the Corps. This would not result in a significant change in impact conclusions of the 2017 SEIR. No impact would occur and no change from the previous analysis is required. Therefore, this topic will not be carried forward in the SEIR.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Existing vegetation onsite currently consists of landscaping in developed areas, nonnative grassland, and previously graded areas on vacant land. Previous environmental document prepared determined that the Project area does not support wildlife movement or a wildlife corridor due to surrounding development and lack of available habitat. Therefore, implementation of the Project would not interfere with wildlife movement, and no new significant impact would occur. Therefore, this topic will not be carried forward in the SEIR.

e) Conflict with any local policies or ordinances protecting biological resources?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. As determined by the FEIS/EIR, there are no local policies protecting biological resources impacted by implementation of the Project. In 2018, the City of Tustin updated their General Plan. As shown in Table 5-1, *Consistency with 2018 General Plan Policies Protection Biological Resources*, the Project would be consistent with the goals and policies identified in the updated General Plan. No impact would occur. Therefore, this topic will not be carried forward in the SEIR.

Table 5-1: Consistency with 2018 General Plan Policies Protection Biological Resources

2018 City of Tustin General Plan Policy	Project Consistency with General Plan Policy
GOAL 5: Protect water quality and conserve water supply	
Policy 5.1: Local drainage courses, channels, and creeks should be improved to protect vegetation and wildlife habitat wherever possible.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. The FEIS/EIR identified several potential jurisdictional waters onsite, including but not limited to ditches and drainages, the Santa Ana/Santa Fe Channel, the Barranca Channel, and Peters Canyon Channel. According to Section 5.4, *Biological Resources*, future developments would require necessary state and federal permits to be provided to the City prior to the issuance of mass or grading permits for grading activities impacting jurisdictional water areas. This would also require development projects to create (establish),

	restore, or enhance wetland/riparian habitats on-site to the maximum extent practicable.
Policy 5.2: Protect groundwater resources from depletion and sources of pollution.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described in Section 5.10 *Hydrology and Water Quality,* future developments would protect water quality and groundwater recharge through the requirement of a project specific SWPPP and a WQMP.
Policy 5.3: Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Development of the TLSP would require development of individual projects to comply with the CAL Green Building Code and would therefore implement sustainable water conserving practices.
Policy 5.4: Support the expansion of reclaimed water production and use wherever possible and economically feasible.	The TLSP SPA would not prevent the implementation of this measure as it would not prevent or conflict with any plans for the expansion of water reclamation facilities.
Policy 5.5: Protect water quality by responsible agency support of enforcement of water quality standards for water imported into the County, and to preserve the quality of water in the groundwater basin and streams.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Water quality would be analyzed on a project-specific basis and protected through the requirement of a SWPPP and WQMP.
Policy 5.6: Coordinate water quality and supply programs with all responsible water agencies, and cooperate and participate in plan preparation and programs.	The TLSP SPA would not prevent the implementation of this measure and would coordinate with all applicable responsible water agencies. Additionally, a Water Supply Assessment would be prepared for TLSP SPA and will be analyzed within the SEIR.
Policy 5.7: Reduce and eliminate contamination of water supply from industrial operations.	Not applicable. The TLSP SPA does not propose any industrial operations and therefore would not prevent the implementation of this measure.
GOAL 6: Identify, designate, and preserve significant or unique riparian habitats.	
Policy 6.1: Encourage the County of Orange to restore riparian habitat above the Lower Peters Canyon Retarding Basin to be used as off-site mitigation for biologic impacts associated with projects located inside or outside the Planning Area.	Not applicable. The TLSP SPA would not prevent the implementation of the Lower Peters Canyon Retarding Basin as an off-site mitigation area for biological impacts as the TLSP area is not located near the Lower Peters Canyon Retarding Basin.
GOAL 7: Conserve and protect natural plant and animal communities.	
Policy 7.1: Inventory unique or significant tree stands, with particular attention given to the cedar stand, eucalyptus groves, and eucalyptus windrows in East Tustin. Develop standards to retain or incorporate the eucalyptus windrows and groves into development plans where feasible. The redwood/sequoia stand has been retained within a park site and integrated into the park design.	Not applicable. The TLSP SPA site has been previously graded, and no significant tree stands currently exist on the site.
Policy 7.2: Conserve important plant communities and wildlife habitats, such as riparian areas, wildlife movement corridors, wetlands, and significant tree stands through the practice of creative site planning, revegetation, and open space easements/dedications.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described in Section 5.4, *Biological Resources*, thresholds a) and b), The TLSP SPA site has been developed and the entire Project area has been graded. No sensitive natural communities have been identified onsite in previous environmental documentation and no new sensitive natural communities

	have been identified through biological record search. Additionally, future developers would analyze biological resources and would be required to obtain permits from CDFW, the Regional Water Quality Control Board (RWQCB), and the US Army Corps of Engineers (Corps).
Policy 7.3: Require development proposals in areas expected to contain important plant and animal communities to include biological assessments.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described above, future developers would analyze biological resources and would be required to obtain permits from CDFW, the Regional Water Quality Control Board (RWQCB), and the US Army Corps of Engineers (Corps).
Policy 7.4: Require new development to revegetate graded areas.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis.
Policy 7.5: Where feasible and consistent with flood control requirements, the treatment of Peters Canyon Wash should retain a natural appearance by minimizing concrete channelization, retaining or replanting indigenous vegetation and/or retaining open space areas along the drainage course.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Peters Canyon Channel extends through the eastern part of the TLSP SPA area; however, future developments would be required to implement applicable flood control requirements.
Policy 7.6: Incorporate planting in new development areas in East Tustin to be compatible with the character and quality of the natural surrounding environment.	Not applicable. The TLSP SPA is not located within the East Tustin area. Therefore, the policy does not apply to the proposed Project.
GOAL 8: Conserve and protect significant topographical features, important watershed areas, resources, and soils.	
Policy 8.1: Develop standards to preserve the unique variety of landforms indigenous in hillside areas, and ensure that the development process is structured to ensure that grading and siting practice reflects the natural topography	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. The TLSP SPA is not located within a hillside area and would be consistent with development standards for the site, as ensured during plan check for individual projects.
Policy 8.2: Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Individual development projects within the TLSP SPA area would require a SWPPP and WQMP that would include BMPs for erosion control.
Policy 8.3: Encourage the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Individual development projects within the TLSP SPA area would require a SWPPP and WQMP that would include BMPs for proper soil management.
Policy 8.4: Place restrictions upon and apply standards to the development of floodplain areas, ecologically sensitive areas and potentially hazardous areas.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. The Project site is not within a floodplain area and as described in Section 5.4, *Biological Resources*, threshold c), the City has 401, 404, and 1602 permits which apply to the Project area. These permits and responsibilities would be assigned to subsequent developers as applications are submitted. With implementation of MM Bio-1, impacts to areas under the jurisdiction of CDFW and Waters of the US would be reduced to a less than significant impact.

	Additionally, according to section 5.9, *Hazards and Hazardous Materials*, the TLSP SPA is not located within a potentially hazardous area and future developments within the TLSP would be subject to existing regulations. Also, as stated in threshold b) above, no sensitive natural communities have been identified onsite in previous environmental documentation and no new sensitive natural communities have been identified through biological record search.
Policy 8.5: Review applications for building and grading permits, and applications for subdivision for adjacency to, threats from, and impacts on geological hazards arising from seismic events, landslides, or other geologic hazards such as expansive soils and subsidence areas.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. Future developments under the TLSP SPA would be subject to design and development standards that are already included in TLSP and require a Geotechnical Investigation to identify risks due to geologic hazards.
Policy 8.6: Site planning and architectural design shall respond to the natural landform whenever possible to minimize grading and viewshed intrusion.	The TLSP SPA would not prevent the implementation of this measure. Future development projects under the TLSP SPA would follow design standards that are already included in TLSP. Additionally, as stated in Section 5.1, *Aesthetics*, the intensification in residential density of the area could slightly alter the visual appearance of the Project site but would not result in a change in effect on a scenic vista or natural landform. Additionally, the SPA would be required to comply with Mitigation Measure Vis-1 from the FEIS/EIR requiring an urban design plan to provide for distinct and cohesive architectural and landscape design as well as harmony with adjacent landscaping
Policy 8.7: Consider public acquisition of significant land resources for open space when funds are available.	Not applicable. The TLSP SPA area is not considered a significant land resource that requires consideration of public acquisition.
Policy 8.8: Require geotechnical studies for developments that are proposed for steep slopes and where geological instability may be suspected. Where a precise location of the El Modena fault is determined, appropriate building setbacks shall be established per State law.	Not applicable. The TLSP SPA area does not include steep slopes and is not located by the El Modena fault, as described in Section 5.7, *Geology and Soils*.
Policy 8.9: Significant natural features shall be preserved and incorporated into proposed development projects.	Not applicable. There are no natural features within the TLSP SPA area, except for riparian areas as described in Section 5.4, *Biological Resources*.
Policy 8.10: Mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, and sensitive habitats through the environmental review process.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described above, the TLSP SPA area is not characterized as having steep slopes. Additionally, as described in Section 5.4, *Biological Resources*, thresholds b) and c), the City has 401, 404, and 1602 permits which apply to the Project area. These permits and responsibilities would be assigned to subsequent developers as applications are submitted. With implementation of MM Bio-1, impacts to areas under the jurisdiction of CDFW and Waters of the US would be reduced to a less than significant impact. Future developers would also be required to obtain permits from CDFW, RWQCB, and the Corps. Furthermore, as described in Section 5.5, *Cultural Resources*, the changes

	to land uses proposed as part of the Project would not result in any new impacts to historic or archeological resources with implementation of MM Arch-2, which would be required by individual development projects as part of the TLSP.
Policy 8.11: Encourage retention of permanent open space through dedication as a part of the development review/subdivision process.	Not applicable. The TLSP SPA is not subject to this General Plan policy.
Policy 8.12: Concentrate higher intensity uses in areas containing less sensitive landforms and preserve the most sensitive landform resources as open space.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. No sensitive landforms are located in the TLSP SPA area and therefore is not subject to preservation.
Policy 8.13: Non-developable or constrained areas should be evaluated for possible use as open space or recreational use.	Not applicable. As exemplified in the 2021-2029 Housing Element Update, identified housing sites have been evaluated and were determined to be developable.
Policy 8.14: Design an integrated open space system in the City that includes landscaped medians and parkways in City streets, the City's park system, bicycle and pedestrian trail systems, and active and passive open space with consideration given to developing guidelines to integrate the system with private open space.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis.
Policy 8.15: Preserve the open space value of the central Peters Canyon ridge by excluding buildings and overhead utility lines from being developed on top and careful siting and landscaping of structures adjacent to the ridgeline.	Not applicable. The TLSP SPA area is not located within the Peters Canyon ridge and is therefore future development implemented under the TLSP SPA would not conflict with this policy.
Policy 8.16: Site buildings and align roadways to maximize public visual exposure to natural features.	The TLSP SPA would not prevent the implementation of this measure and consistency would be analyzed on a project-specific basis. As described in Section 5.1, *Aesthetics*, future development would follow existing development standards and design guidelines, including building height requirements, setbacks, and signage that represent the change in land uses while maintaining or enhancing the character of the TLSP area. The proposed TLSP SPA would not significantly alter allowable heights in the Project site such that it would degrade the quality or character of the site, including natural features.
Policy 8.17: Maintain the natural profile and landform character of the "knoll" park site in East Tustin.	Not applicable. The TLSP SPA is not located in the East Tustin area and therefore does not affect the "knoll" park site.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Project area is within the plan area of the Orange County Central-Coastal Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP); however, the site is not within a reserve established under the NCCP/HCP. In 2019, the NCC revised the habitat restoration and enhancement plan for the Central and Coastal Subregion. The plan identifies and prioritizes potential restoration areas within the reserve and provides detailed information on the most effective methods of associated costs of restoration activities.

In 2006, Orange County voters approved the renewal of Measure M, effectively extending the half cent sales tax to provide funding for transportation projects and programs in the county. As part of the renewed

Measure M (or Measure M2), a portion of the M2 freeway program revenues were set aside for the M2 Environmental Mitigation Program (EMP) to provide funding for programmatic mitigation to offset impacts from the freeway projects in the 13 freeway segments covered by Measure M2. The Orange County Transportation Authority (OCTA) prepared a Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) as a mechanism to offset potential project-related effects on threatened and endangered species and their habitats in a comprehensive manner. The NCCP/HCP achieves higher-value conservation than what would be expected through project-by-project mitigation in exchange for a streamlined project review and permitting process for the Measure M2 freeway program as a whole.

The NCCP/HCP was finalized in spring 2017 (Orange County Transportation Authority, 2016), and covers 13 listed and non-listed species including: plants: intermediate mariposa lily, many-stemmed dudleya, and southern tarplant; fish: arroyo chub; reptiles: coast horned lizard, orangethroat whiptail, and western pond turtle; birds: cactus wren, coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher; and mammals: bobcat and mountain lion. The OCTA NCCP/HCP is applicable to the areas acquired for conservation purposes, as well as any projects that would occur within OCTA right-of-way. The Project would not directly impact OCTA right-of-way, and future improvements made as a result of individual development projects would be required to conduct a project-specific analysis of consistency with the OCTA NCCP/HCP since potential impacts are too speculative to analyze within this programmatic analysis. No impact would occur and no change from the previous analysis is required.

Mitigation Measures

MM Bio-5 Biological surveys shall be conducted by a qualified biologist to determine the potential for special status species within the project site for all future projects at the time that development is proposed. The project-level biological survey report shall analyze these projects' impacts on sensitive animal species and shall propose mitigation to reduce project impacts to a less than significant level.

5.5 CULTURAL RESOURCES

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒	☐

Prior Environmental Findings

As discussed above, Hangar 28 (northern hangar) and Hangar 29 (southern hangar) of the former MCAS were listed on the National Register of Historic Places. The two hangars, along with other resources onsite, were determined to be eligible for listing as a non-contiguous National Historic District. Other resources include Buildings 28A and 29A, mooring mats 1 through 5, and the roads connecting these structures to Hangars 28 and 29. When previous environmental documents were prepared, it was unknown whether implementation of the TLSP would involve demolition of both, one, or neither of the hangars. It was determined that the loss of both hangars would have a significant and unavoidable impact. Mitigation measures were required for impacts to the two hangars and the above-described related historical resources. Impacts were identified as significant and unavoidable after implementation of mitigation.

In accordance with Section 106 of the National Historic Preservation Act, the City of Tustin, the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation, the Department of the Navy, and the County of Orange executed a Memorandum of Agreement that identified measures to mitigate the impacts of the destruction of portions of the eligible historic district, including the removal of Hangar 28 and Hangar 29 (RBF 2008). Pursuant to the agreement, the County of Orange conducted a marketing study of Hangar 28, and the City of Tustin conducted a marketing study of Hangar 29. Both jurisdictions reached the conclusion that there is no economically viable use for the hangars, requiring implementation of mitigation measures from Stipulation III of the agreement. The required mitigation measures included a written history, documentary video, and exhibit. All mitigation measures identified in Stipulation III of the agreement have been satisfied. No impact would occur as a result of the proposed TLSP Amendment, and no change from the previous analysis is required.

As stated above, on November 7, 2023, a fire erupted in Navy Hangar 28. The Navy hangar was completely destroyed, and as of the date of this initial study, it is undergoing demolition and removal. The fire was contained to Navy Hangar 28, such that Navy Hangar 29 was not impacted, and remains unaltered.

2017 SEIR Measures Applicable to the Proposed Project

MM Arch-2 Prior to issuance of grading permits the cities of Tustin and Irvine shall each require applicants of individual development projects to retain as appropriate a county-certified archaeologist. If buried resources are found during grading within the reuse plan area a qualified archaeologist would need to assess the site significance and perform the appropriate mitigation. The Native American viewpoint shall be considered during this

process This could include testing or data recovery Native American consultation shall also be initiated during this process.

MM Hist-3 As specified in the MOA a substantive effort will be made to determine whether there is an economically viable adaptive use of Hangar 28 and Hangar 29.

MM Hist-4 If the marketing effort identifies an economically viable adaptive use of either of the complexes that complex will be encumbered by a historic preservation covenant. In the case of the Hangar 28 complex these measures shall balance the needs of the adaptive use and the needs for effective operation of the Federal Lands to Parks or Historic Monument programs.

Current Conditions

A cultural resources records search was completed for the Project site by BFSA at the South Central Coastal Information Center (SCCIC) on August 22, 2023, and encompassed the Project site and a 500-foot buffer surrounding the Project site (BFSA Environmental Services, 2023). Based upon the records search results, five resources have been previously recorded within the Project site. The resources identified within the Project site include three prehistoric resources, one historic resource, and one multicomponent resource.

The prehistoric resources include two isolate artifacts that include a stone bowl fragment (P-30-010019) and a granitic pestle (P-30-100201). In addition, one prehistoric limited habitation site (P-30-001652) was also previously recorded within the Project site. These resources have been previously evaluated as not eligible to the California Register of Historic Resources (CRHR).

Historic resources previously included two former United States Marine Corp World War II era blimp hangars (P-30-160312). These resources were previously evaluated as both CRHR eligible resources and National Register of Historic Places (NRHP) eligible resources, and one of the two original hangars remains extant. On November 7, 2023, a fire caused severe damage to Hangar 28, resulting in a total loss of the structure. At the time of the preparation of this initial study, the demolition of the structure is underway, and the remains of the hangar will eventually be removed by the US Navy. Plans for the hangar's removal have not been finalized. Hangar 29 remains in place. It is currently vacant, although occasionally leased by the City of Tustin for special events and unique activities, such as filming commercials.

The multicomponent site (P-30-001760) is primarily historic in composition consisting of historic glass bottles of varying types, ceramics, flatware, and one prehistoric mano discovered during cultural resource monitoring for the Tustin Phase I Legacy Project. The site was determined as not eligible to the CRHR.

In addition to the five resources identified inside the Project area, four resources were identified within the search radius 500-foot buffer. The resources include a prehistoric food preparation site, two prehistoric isolates, and historic military structures. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. State CEQA Guidelines Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered "historically significant" if it meets one of the following criteria:

i. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
ii. Is associated with the lives of persons important in our past;

iii. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
iv. Has yielded, or may be likely to yield, information important in prehistory or history.

The changes to land uses proposed as part of the Project would not result in any new impacts to historic resources. As stated above, mitigation measures required prior to demolition of the hangars have been implemented (MM Hist-3 and MM Hist-4). No new historic resources were identified as part of the Project record search that would result in changed Project site conditions or new or more severe impacts. The land use changes proposed would not result in new impacts or result in changes to the prior environmental findings. No new significant impact would occur. Therefore, this topic will not be carried forward in the SEIR.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Archaeological Resources are prehistoric or historic evidence of past human activities, including structural ruins and buried resources. As part of the Project cultural record search, five resources were identified within the Project site. Of the five resources, the only two resources determined to be eligible for the CRHR were the two former United States Marine Corp World War II era blimp hangars (P-30-160312). The other resources were previously evaluated and determined to be ineligible for listing on the CRHR.

As concluded in the FEIS/EIR, archaeological resources could be buried in site soils affiliated with the historic uses of the site and could be damaged by ground-disturbing activities implemented under the TLSP. Although the site has been graded, development may require grading to an increased depth. The development footprint for the Project is within the impact area evaluated in the 2017 SEIR. The Project would be required to comply with FEIS/EIR mitigation measures to reduce impacts to less than significant (MM Arch-2). The proposed Project would not result in a substantial change from the archaeological resources impacts identified in the 2017 SEIR. Therefore, this topic will not be carried forward in the SEIR.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. California Health and Safety Code Section 7050.5 requires that in the event that human remains are discovered within the Project area, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. The project would comply with existing law, and potential impacts to human remains would be less than significant. Furthermore, the development footprint is within the impact area evaluated in the 2017 SEIR and no new impacts would occur. Therefore, this topic will not be carried forward in the SEIR.

5.6 ENERGY

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☒	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☒	☐	☐	☐

Prior Environmental Findings

This topic was not analyzed by previous CEQA documentation. Energy will be further analyzed under an air quality, greenhouse gas, and energy impact assessment that will be prepared to determine potential impacts of the TLSP as a whole and potential impacts that could result from the proposed changes to the Approved Project under the Modified Project.

Current Conditions

The TLSP is currently partially developed with a variety of residential, commercial, recreational, and institutional land uses. Operation of these uses require electric, gas, and fuel for various stationery and transportation demands. The TLSP area is currently served by Southern California Edison and Southern California Gas Company.

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Change in Circumstances Requiring EIR Revisions. This topic was not analyzed by previous CEQA documentation. Energy will be further analyzed under an air quality, greenhouse gas, and energy impact assessment that will be prepared to determine potential impacts of wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation. Therefore, this topic will be carried forward in the SEIR.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Change in Circumstances Requiring EIR Revisions. This topic was not analyzed by previous CEQA documentation. Energy will be further analyzed under an air quality, greenhouse gas, and energy impact assessment that will be prepared to determine potential impacts of obstruction of state or local plans for renewable energy and energy efficiency. Therefore, this topic will be carried forward in the SEIR.

5.7 GEOLOGY AND SOILS

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42)	☐	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒	☐

Prior Environmental Findings

Impacts related to collapsible soils, regional subsidence, expansive soils, slope instability, and erosion were identified in the certified FEIS/EIR as less than significant after compliance with state and local regulations and standards, and established engineering procedures and techniques. No impacts related to landslides or mudflows were identified.

No active faults were identified on or next to the site. The FEIS/EIR identified 10 active faults ranging from 10 miles to 48 miles from the Project area and estimated to be capable of generating earthquakes ranging from magnitude 6.5 to 7.8. Impacts related to surface rupture of a fault, strong ground shaking, ground

failure including liquefaction, tsunamis and seiches, and flooding due to dam failure after an earthquake were all identified as less than significant.

Site soils were identified as highly to very highly expansive in the FEIS/EIR. Measures identified in the certified FEIS/EIR for reducing hazards from expansive soils include removal of clay-rich soils and replacement with a specified thickness of non-expansive granular soil beneath structures, concrete slabs, and footings; improving the expansive soil with presaturation of expansive materials; supplemental reinforcement of the building foundations and slabs; and installing post-construction drainage control to minimize the collection of water under or adjacent to structures. Impacts were identified as less than significant in the FEIS/EIR after compliance with state and local regulations.

The 2017 SEIR findings were consistent with the findings of the certified FEIS/EIR regarding exposure of people or structures to potential substantial adverse effects involving rupture of a known earthquake fault and seismic-related ground failure.

Several requirements applicable to the TLSP were revised prior to adoption of the 2017 SEIR. The 2013 California Building Code (CBC) included additional requirements for subdivisions requiring tentative and final maps and for other specified types of structures are in California Health and Safety Code Sections 17953 to 17955 and in Section 1802 of the 2013 CBC. The 2017 SEIR determined that future buildings and structures would meet the City of Tustin Building Code and CBC, and the project would not alter the conclusions of the FEIS/EIR related to seismic ground shaking. Further, geotechnical investigations for projects developed pursuant to the TLSP would be required to identify engineering controls to eliminate any potential for lateral spreading. Therefore, no new substantial impacts would occur (Placeworks, 2015, p.49). Additionally, requirements for SWPPPs increased since adoption of the FEIR/EIS, including the requirement to estimate sediment risk to receiving waters. Implementation of erosion control and sediment control BMPs by projects developed pursuant to the TLSP Amendment would minimize erosion. No new significant impact would occur.

2017 SEIR Measures Applicable to the Proposed Project

MM Paleo-1 The cities of Tustin and Irvine shall each require applicants of individual development projects to comply with the requirements established in a Paleontological Resources Management Plan (PRMP) prepared for the site, which details the methods to be used for surveillance of construction grading, assessing finds, and actions to be taken in the event that unique paleontological resources are discovered during construction.

MM Paleo-2 Prior to the issuance of a grading permit, project applicants shall provide written evidence to each city that a county-certified paleontologist has been retained to conduct salvage excavation of unique paleontological resources if they are found.

Current Conditions

Other than subsequent grading, remediation, and development activities, there are no changes to the geology and soils conditions onsite as evaluated in the FEIS/EIR.

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. In 1972, the Alquist-Priolo Special Studies Zones Act was signed into law. In 1994, it was renamed the Alquist-Priolo

Earthquake Fault Zoning Act (A-P Act). The primary purpose of the Act is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The A-P Act requires the State Geologist (Chief of the California Geology Survey) to delineate "Earthquake Fault Zones" along with faults that are "sufficiently active" and "well-defined." The boundary of an "Earthquake Fault Zone" is generally about 500 feet from major active faults and 200 to 300 feet from well-defined minor faults. The A-P Act dictates that cities and counties withhold development permits for sites within an Alquist-Priolo Earthquake Fault Zone until geologic investigations demonstrate that the site zones are not threatened by surface displacements from future faulting.

The proposed Project would allow for the development of additional residential units within Neighborhood D South and G and would introduce new residential development potential to Neighborhood D North. The project is proposed in order to meet the needs of the City's 6th Cycle RHNA allocation, and subsequently, the 2021-2029 Housing Element Update. The Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the FEIR/EIS, subsequent amendments, and 2017 SEIR. No changes in circumstances have occurred since 2017 SEIR adoption. Therefore, the Project would result in no new impacts. This topic will not be carried forward within the SEIR.

ii. Strong seismic ground shaking?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. As discussed above, the Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. Since certification of the 2017 SEIR, several updates to the CBC as occurred and the 2022 CBC has been adopted and will be the applicable standard for development moving forward. Several changes have been made since the 2013 CBC. All geotechnical investigations and building specifications will be conducted in compliance with the most current applicable set of CBC standards. Verification of compliance with applicable standards would be confirmed during plan check on a project-by-project basis. Updates to CBC standards reflect the latest scientific understanding and construction methods available, and overall, reduce potential geotechnical impacts from those previously identified as advancements are made. Therefore, the Project would result in no new impacts. This topic will not be carried forward within the SEIR.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Soil liquefaction is a phenomenon in which saturated, cohesionless soils layers, located within approximately 50 feet of the ground surface, lose strength due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. During the loss of stress, the soil acquires "mobility" sufficient to permit both horizontal and vertical movements. Soil properties and soil conditions such as type, age, texture, color, and consistency, along with historical depths to ground water are used to identify, characterize, and correlate liquefaction susceptible soils.

Soils that are most susceptible to liquefaction are clean, loose, saturated, and uniformly graded fine-grained sands that lie below the groundwater table within approximately 50 feet below ground surface. Lateral spreading is a form of seismic ground failure due to liquefaction in a subsurface layer.

As discussed above, the Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. Latest California Geological Survey (CGS) data shows that the Project site remains an area classified as a liquefaction hazard (California Geological Survey, 2020). The FEIS/EIR identified engineering techniques that would reduce hazards associated with liquefaction to less than significant, including: (1) excavation and removal or recompaction of potentially liquefiable soils; (2) in-site ground densification; (3) other types of ground improvement; (4) deep foundations that have been designed to accommodate liquefaction effects;

(5) reinforced shallow foundations; and (6) design of the proposed structures or facilities to withstand predicted ground softening and/or predicted vertical and later ground displacements to an acceptable level of risk. In addition, geotechnical investigations for projects onsite are required to evaluate the potential for liquefaction on the affected Project area and provide measures to minimize hazards arising from liquefaction. The project would not result in any substantial changes to the environmental impacts previously evaluated in the FEIS/EIR. Compliance with required geotechnical investigations and engineering techniques would result in less than significant impacts and no new substantial impact would occur. This topic will not be carried forward within the SEIR.

iv. Landslides?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Landslides and other slope failures are secondary seismic effects that are common during or soon after earthquakes. Areas that are most susceptible to earthquake induced landslides are steep slopes underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits.

As discussed above, the Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. Existing Project site conditions are consistent with conditions analyzed within the 2017 SEIR, and no further changes to circumstances have been made. Therefore, the Project site is not at risk of landslide and no new impacts would occur.

b) Result in soil erosion or the loss of topsoil?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. As discussed above, the Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. The 2017 SEIR determined that with implementation of a SWPPP, construction impacts would be less than significant on erosion and loss of topsoil. The Project would introduce the opportunity for additional development within the TLSP footprint, which could increase the intensity and duration of construction. However, SWPPPs would be developed and implemented on a project-by-project basis. The City would review SWPPPs prior to approval of the grading permit and would ensure soil erosion impacts would not occur as a result of project construction. Following construction, site soils would be stabilized by development and impacts would be less than significant. Therefore, no new impacts will occur, and this topic will not be carried forward within the SEIR.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. As discussed above, the Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR.

d) Be located on expansive soil, as defined in in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Expansive soils contain certain types of clay minerals that shrink or swell as the moisture content changes; the shrinking or swelling can shift, crack, or break structures built on such soils. Arid or semiarid areas with seasonal changes of soil moisture experience, such as southern California, have a higher potential of expansive soils than areas with higher rainfall and more constant soil moisture.

As discussed above, the Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. The Project site is susceptible to liquefaction, as identified above (California Geological Survey, 2020). The site may be susceptible to lateral spreading due to the high potential for liquefaction onsite. Consistent with the findings of the FEIS/EIR, all grading operations and construction would be conducted in conformance with the City of Tustin Grading Manual and most recent version of the CBC. Further, geotechnical investigations for projects developed pursuant to the TLSP would be required to identify engineering controls to eliminate any potential for lateral spreading. No new significant impacts would occur.

Compressible soils susceptible to some consolidation were identified in the FEIS/EIR as likely over the entire Project area, especially east of Peters Canyon Channel. Each project conducted under the proposed TLSP would be required to be consistent with the most recent CBC and incorporate engineering techniques for removal of soils unsuitable for supporting proposed structures and replacement with engineered fill soils capable of supporting such structures. No new significant impact would occur.

The 2017 SEIR Initial Study stated that subsidence resulting from groundwater withdrawal has not been reported in the region (Placeworks, 2015, p.52). However, the greater Los Angeles metropolitan area experiences surface deformation due to a variety of natural and human-induced causes (U.S. Geological Survey, 2001). Each project conducted under the proposed TLSP would be required to be consistent with the most recent CBC and incorporate engineering techniques for removal of soils unsuitable for supporting proposed structures and replacement with engineered fill soils capable of supporting such structures. Subsidence risk and geotechnical requirements would be determined on a project-specific basis. Therefore, no new impacts would occur.

This topic will not be carried forward within the SEIR.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. TLSP buildout would include construction of sewer mains and sewer laterals. The IRWD provides wastewater treatment for the Project site. Septic tanks are not proposed as part of the Project. No impact would occur. This topic will not be carried forward within the SEIR.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. As discussed above, the Project would occur within the existing footprint of the Approved Project. Potential impacts were previously analyzed in the certified FEIR/EIS, subsequent amendments, and 2017 SEIR. Paleontological resources are fossils, which are the recognizable remains or evidence of past life on earth, including bones, shells, leaves, tracks, burrows, and impressions. The ground disturbance footprint of the TLSP would be the same as that analyzed in the FEIS/EIR, subsequent environmental documents, and the 2017 SEIR. The Project would be required to comply with FEIS/EIR mitigation measures to reduce impacts to less than significant (MM Paleo-1 and Paleo-2). The proposed project would not result in a substantial change from paleontological resources impacts identified in the FEIS/EIR. This topic will not be carried forward within the SEIR.

5.8 GREENHOUSE GAS EMISSIONS

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐	☐

Prior Environmental Findings

The certified FEIS/EIR did not evaluate greenhouse gas (GHG) emissions impacts because it was not included in the CEQA Guidelines Appendix G checklist, and the City of Tustin did not have adopted thresholds at the time of preparation. However, the 2017 SEIR did analyze GHG emissions.

The 2017 Draft SEIR found that annual GHG emissions associated with both the Adopted TLSP, and the Modified Project would exceed the SCAQMD bright-line threshold of 3,000 $MTCO_2e$ per year (2017 Draft SEIR, p. 5.2-23). In addition, both the Adopted TLSP and Modified Project would also exceed the AB 32 and forecasted SB 32 efficiency metrics. However, under full buildout conditions, the Modified Project would reduce annual emissions by 12,239 $MTCO_2e$ per year compared to the Adopted TLSP, which represents a 5 percent overall decrease. The reductions would primarily be from the energy and transportation sectors. For the energy sector, the reduction is attributed to the overall decrease in non-residential square footage. Mitigation Measures AQ-3 and AQ-4 were included to reduce potentially significant GHG emissions, which were focused on the future implementation of Transportation Demand Management (TDM) techniques. With implementation of Mitigation Measures AQ-3 and AQ-4, Pursuant to Public Resources Code § 21166 and CEQA Guidelines § 15162, the changes proposed by the 2017 TLSP SPA were determined to not result in any new impacts, or increase the severity of impacts, with respect to GHG emissions impacts.

The 2017 SEIR Initial Study found that with regard to CEQA Section 21166 and CEQA Guidelines Section 15162(a), the changes proposed by the 2017 TLSP SPA would not result in any new impacts or increase the severity of impacts with respect to conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions (Placeworks, 2015, p. 55). The Initial Study found that the project was consistent with both applicable plans adopted for the purposes of reducing GHG, CARB's 2008 Scoping Plan and SCAG's 2012 RTP/SCS. Therefore, impacts were determined to be less than significant, and this topic was not carried forward in the 2017 SEIR.

Current Conditions

Global climate change is not confined to a particular project area. A typical project does not generate enough greenhouse gas (GHG) emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact. GHGs are produced by both direct and indirect emissions sources. Direct emissions include consumption of natural gas, heating and cooling of buildings, landscaping activities and other equipment used directly by land uses. Indirect emissions include the consumption of fossil fuels for vehicle trips, electricity generation, water usage, and solid waste disposal.

Founded in 1965, the Southern California Association of Governments (SCAG) holds a federal designation as a Metropolitan Planning Organization (MPO) and is a state-recognized Regional Transportation Planning Agency and Council of Governments. SCAG's primary role is developing long-range plans for a region encompassing six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 cities, an area covering more than 38,000 square miles.

Since certification of the 2017 SEIR, the SCAG RTP/SCS has undergone several updates. The RTP/SCS is revised every four years. On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), and the addendum to the Connect SoCal Program Environmental Impact Report. Additionally, a new RTP/SCS is currently underway. The Draft Connect SoCal 2024 plan is now available for public review and comment through Jan. 12, 2024. A principal requirement of the Regional Transportation Plan is that the US Environmental Protection Agency's (EPA) Transportation Conformity Regulations are complied with at the regional level. The California Sustainable Communities and Climate Protection Act of 2008, better known as Senate Bill 375, mandates the integration of transportation, land use, and housing planning with the objective of smarter growth. Under SB 375, the California Air Resources Board issues a travel-based greenhouse gas (GHG) emissions reduction target for the region and requires MPOs to develop a Sustainable Communities Strategy that demonstrates target achievement in alignment with the RTP and the Regional Housing Needs Assessment (RHNA). SCAG's 6th cycle RHNA methodology allocated the majority of the region's housing need to jurisdictions on the basis of job accessibility and transit accessibility as defined in Connect SoCal 2020. As such, ensuring that local plans to accommodate this need are reflected in Connect SoCal 2024's forecasted regional development pattern is one tool in achieving the region's GHG and conformity targets.

Since certification of the 2017 SEIR, the CARB Scoping Plan has undergone several updates as well. A 2017 CARB Scoping Plan was adopted to achieve California's 2030 GHG Target. Additionally, the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The final proposal of the 2022 Scoping Plan is currently under public review for adoption.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Change in Project Requiring EIR Revisions. The Project would increase residential uses and maintain nonresidential uses. There would be changes in GHG emissions based on the addition of residential units and on updated emission modeling with updated emissions factors. As part of the SEIR, a GHG technical analysis will be prepared to determine the change in short-term and long-term criteria air pollutant emissions from the Project. CalEEMod will be used to model criteria air pollutant emissions from the Approved Project and the proposed Project at buildout. The GHG emissions analysis will be based on the average daily trip generation and/or vehicle miles traveled (VMT) for the Approved Project and the proposed Project. The SEIR will compare the net increase in emissions at buildout to regional significance thresholds and determine if there are any new significant impacts or mitigation measures required. Therefore, this topic will be carried forward in the SEIR.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Change in Project Requiring EIR Revisions. The Project would increase residential uses and maintain nonresidential uses. Additionally, the SCAG RTP/SCS and the CARB Scoping Plan have been updated since the 2017 SEIR was certified. The Project would be reviewed in consistency with the latest adopted CARB Scoping Plan and SCAG RTP/SCS to determine whether the 2017 TLSP SPA conforms to the policies and targets within the applicable GHG reduction plans and strategies. Therefore, the Project could result in a new significant impact, therefore this topic will be carried forward in the SEIR.

5.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☐	☒

Prior Environmental Findings

Hazardous Materials

Multiple hazardous materials sites were identified in the certified FEIS/EIR. Contaminants include trichloroethylene, trichloropropane, jet fuel, petroleum hydrocarbons, volatile organic compounds, metals, and polynuclear aromatic hydrocarbons. Asbestos-containing materials were identified in 77 buildings onsite, and nonresidential buildings built before 1980 were assumed to contain lead-based paint. Impacts were identified in the FEIS/EIR as less than significant after remediation of environmental contamination per existing agreements and regulatory compliance.

Subsequent analysis provided in the 2006 and 2013 Addenda identified progress made by the ongoing cleanup activities.

Three hazardous materials sites within the Project area where remediation was ongoing were identified in the 2006 Addendum.

- **Operating Unit 1A (OU 1A):** Trichloroethylene and trichloropropane were found in groundwater and soil. Site remediation—consisting of pumping and treating groundwater is ongoing.
- **Operating Unit 1B (OU 1B):** Paint Stripper Disposal Area and Drum Storage Area No. 2: Trichloroethylene was found in groundwater and soil. Site remediation—consisting of pumping and treating groundwater is ongoing.
- **Operating Unit 4B:** Consists of three subareas: Mingled Plumes Area, Drainage Area No. 1 Ditch 5A South, and Paint Locker and Drum Storage Area. Trichloroethylene and other chlorinated hydrocarbons were found in groundwater. Remedial action for groundwater contamination—consisting of in situ bioremediation and monitored natural attenuation—as well as monitoring are ongoing. (BonTerra 2006).

Other cases of hazardous materials identified in the certified FEIR/EIS have been closed; site closure includes a determination by a regulatory agency that no further remedial action is required. Multiple compliance programs are in place allowing ongoing cleanup of hazardous materials sites by the Navy after the property was transferred. The 1999 Federal Facilities Site Remediation Agreement provides for coordinated remediation via these compliance programs under the oversight of DTSC in coordination with the Santa Ana RWQCB. The Navy will remediate all hazardous materials sites overlain by proposed residential uses to residential standards pursuant to the compliance programs.

At the time that the 2017 TLSP SPA was adopted, Heritage Elementary School, at 15400 Lansdowne Road, was not operating as an elementary school. The facility was being used for TUSD administrative functions and temporarily houses two TUSD high school programs—Hillview Continuation High School and Sycamore High School, an independent study program—during modernization work at the two campuses housing those programs. The 2017 SEIR Initial Study analyzed impacts related to the newly developed and proposed schools within the TLSP. Since the 2013 Addendum, two new contaminated areas were identified via GeoTracker; however, neither were identified as a recognized environmental concern (REC) (2017 TLSP SEIR Initial Study, p. 61). The Initial Study found that the school districts are required to comply with CEQA Guidelines Section 15168 addressing potential health impacts resulting from exposures to hazardous materials, wastes, and substances on school facilities. They must also comply with additional site testing required by the State Education Code. Therefore, the 2017 TLSP SPA did not permit development of industrial land uses that would emit hazardous emissions or use substantial amounts of hazardous materials. Hazards to students resulting from hazardous materials used in conjunction with uses at the proposed high school and at Heritage Elementary School was found to be less than significant after compliance with regulations.

Airport-Related Hazards

The FEIS/EIR acknowledged that development within the TLSP area would be subject to Federal Aviation Administration (FAA) height restrictions and reviewed by the Airport Land Use Commission (ALUC) for Orange County to ensure there is no interference with flight operations. The FEIS/EIR determined that compliance with these requirements would reduce impacts to less than significant.

In 2008, ALUC approved a comprehensive update of the Airport Environs Land Use Plan (AELUP) for John Wayne Airport. The TLSP area remains within the Height Restriction Zone for the John Wayne Airport.

The 2017 TLSP Amendment was determined to not cause a substantial increase in air traffic levels or change in traffic levels or location, since the project would stay within the trip cap for the site. The 2017 amendment would permit 2,212 additional housing units and eliminate about 1.7 million nonresidential square feet

compared to the Adopted TLSP. The Airport Land Use Commission for Orange County has a review policy for buildings of a certain height (110 to 200 feet within the TLSP area) to reduce interference with flight operations. Any structures within the TLSP that exceed the height thresholds would be subject to review by the FAA and the Airport Land Use Commission. Consistent with the findings of the certified FEIS/EIR, impacts are less than significant. The 2017 SEIR Initial study determined that the height restrictions over the Project area have not changed since certification of the FEIS/EIR (Placeworks, 2015, p.97).

Current Conditions

Since adoption of the 2017 TLSP SPA, Heritage Elementary School has begun to function as an elementary school serving the TLSP and surrounding area with a focus on science, technology, engineering, arts, and math—subjects collectively referred to as STEAM. Responsibility for cleanup in the TLSP area remains unchanged. Soil and groundwater remediation has been ongoing since certification of the FEIS/EIR.

As noted previously, on November 7, 2023, a fire caused severe damage to Hangar 28, resulting in a total loss of the structure. At the time of the preparation of this initial study, the demolition of the structure is underway, and the remains of the hangar will eventually be removed by the US Navy. Plans for the hangar's removal have not been finalized, though continued testing is underway. Results from tests performed to date by multiple entities (including South Coast AQMD, US EPA, USN and IMT contractors) in response to the Hangar Fire Incident suggest that the main concern for asbestos exposure was from bulk debris while asbestos fibers in the air played a limited role. While several heavy metals were originally detected in mobile monitoring of the smoke plume, additional metal testing revealed these returned to normal background levels. Air monitoring of metals collected to date were under the level of concern or were not detected. Experts from the Incident Management Team's (IMT) Environmental Unit have determined that testing indoor spaces is not necessary, thanks to reassuring test results from nearby facilities (Orange County Sheriff Department's facilities, Public Schools, local parks, community centers). The most concerning health hazard throughout the Fire Hangar Incident that remains is Asbestos Containing Material (ACM) debris at the site and direct contact with this debris.

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. A hazardous material is defined as any material that, due to its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that a business or the local implementing agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Hazards to the public or the environment arising from routine transport, use, or disposal of hazardous materials were identified as less than significant after regulatory compliance in the certified FEIS/EIR and 2017 SEIR. Buildout of the Project would use similar types and amounts of hazardous materials as implementation of the approved TLSP. The use, transport, and disposal of hazardous materials would be required to comply with existing regulations of several agencies, including the Department of Toxic Substances Control (DTSC), the EPA, California Division of Occupational Safety and Health, Orange County Environmental Health, and the Orange County Fire Authority. No new significant impact would occur. This topic will not be carried forward in the SEIR.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Project consists of the same development area analyzed in the certified FEIS/EIR and 2017 SEIR. However, as part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood G. Under previous CEQA documents, Neighborhood D North was not previously identified for the accommodation of future housing and was planned for nonresidential uses. The remaining Planning Areas will remain unchanged.

Buildout of the Project would use similar types and amounts of hazardous materials as implementation of the approved TLSP. The operation of proposed residential uses would not require the use of significant amounts of hazardous materials, in that residential activities are limited to the use of hazardous materials such as solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these hazardous materials products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the Project. Additionally, the introduction of residential land uses to Neighborhood D North, which was previously planned for nonresidential uses, would not result in new impacts. Neighborhood D North is planned for the future development of commercial, office, and institutional land uses. These land uses do not require the use of hazardous materials and would not pose a risk to surrounding future residential uses. The TLSP area as a whole does not permit industrial land use that would require more intensive use of various hazardous materials.

Compliance with regulatory requirements would reduce hazards to the public and the environment from accidental release of hazardous materials. The on-going clean-up and remediation of hazardous materials contamination within the TLSP area would not result in a significant hazard to the public. Remediation is required to implement several measures to ensure safe standards and manage or isolate potentially hazardous substances. This activity occurs under the oversight of DTSC in coordination with the Regional Water Quality Control Board. No new substantial impact would occur. This topic will not be carried forward in the SEIR.

c) Emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Since certification of the 2017 SEIR, Heritage Elementary School has begun to function as an elementary school. The Project would include the allowance for additional residential development within the existing TLSP footprint. The Project does not propose and would not permit development of industrial land uses that would emit hazardous emissions or use substantial amounts of hazardous materials. The TLSP would permit development of residential, commercial, institutional, and open space land uses. Hazards to students resulting from hazardous materials used in conjunction with uses at the proposed high school and at Heritage Elementary School would be less than significant after compliance with regulations. No new substantial impact would occur. This topic will not be carried forward in the SEIR.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Since certification of the 2017 SEIR, no new sites have been identified within the TLSP according to GeoTracker

database (State Water Resource Control Board, 2023). Ten sites continue to remain open as military cleanup sites. These sites have been previously analyzed under the certified FEIR/EIS, subsequent CEQA documentation, and the 2017 SEIR. Therefore, no new or substantially more severe impacts are anticipated to occur. This topic will not be carried forward in the SEIR.

e) For a project within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project area?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. As part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood G. The remaining Planning Areas will remain unchanged. The Project would permit development of a net increase of 2,211 residential units (a maximum of 4,970 units with density bonus) compared to the Adopted TLSP.

As previously noted, the ALUC for Orange County reviews projects with buildings of a certain height (110 to 200 feet depending on location in the TLSP area) to reduce interference with flight operations. The proposed Project would not increase the allowable building heights within these ranges. Any structures in the TLSP that exceed the height restrictions in the AELUP would also be subject to an obstruction evaluation by the FAA and ALUC to determine whether safety hazards would result. Consistency with these regulations would ensure airport-related safety hazards are less than significant. No new significant impact would occur. This topic will not be carried forward in the SEIR.

f) Impair implementation of an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Project would result in land use changes and the allowance of increased density within the TLSP Neighborhood D North, D South, and G. Pursuant to the City's Emergency Operations Plan, specific evacuation requirements will vary with each situation, but should be carried out in a manner consistent with other critical functions (City of Tustin, 2019). Under ideal circumstances there will be enough time for radio and/or television stations to broadcast the required evacuation information via the Emergency Alert System, and if enough time is available, copies of the evacuation order or notice and route. The Project site is not designated as an emergency evacuation route. The Project would not impair the implementation of evacuation protocol in the event of an emergency within the City or Project site. Additionally, each future project implemented as part of the TLSP would undergo project-level plan check with the City and would be reviewed by the City's fire department (Orange County Fire Authority) to ensure proper emergency access to and from the site. No new significant impact would occur. This topic will not be carried forward in the SEIR.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The TLSP is not located within a fire hazard zone (California Department of Forestry and Fire Protection, 2022). Development within the TLSP area is required to comply with Orange County Fire Authority regulations. Buildout of the TLSP would not expose people or structures to substantial hazards from wildland fires, and no substantial new impact would occur. This topic will be further analyzed within the SEIR.

5.10 HYDROLOGY AND WATER QUALITY

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☒	☐	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☐	☒	☐
i) Result in a substantial erosion or siltation on- or off-site;	☐	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☐	☒	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☒	☐	☐	☐	☐
iv) Impede or redirect flood flows?	☐	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐	☐	☐

Prior Environmental Findings

Water Quality

Water quality impacts were identified in the certified FEIS/EIR as less than significant after regulatory compliance. No substantial change was identified in subsequent environmental reviews.

The 2017 SEIR Initial Study determined that all construction operations of one acre or more would be required to prepare and implement Stormwater Pollution Prevention Plans (SWPPPs) through enforcement of the California General Permit (CGP) (SEIR 2017 Initial Study, p. 65). No new substantial water quality impact would result from construction pursuant to the 2017 TLSP SPA.

Groundwater

Groundwater under the site ranges from brackish to saline; shallow groundwater onsite is contaminated with hazardous materials in several places. The certified FEIR/EIS determined that the IRWD incentive not to pump water over average historical production levels because the water would cost the IRWD the same amount as imported water; therefore, impacts to groundwater as a result of increased water demand would be less than significant. Subsequent CEQA analysis found impacts to groundwater also to be less than significant.

The 2017 SEIR Initial Study found that due to the conversion of commercial development to residential development, there will be a net overall decrease in impervious conditions in the Planning Areas subject to land use changes (Placeworks, 2015, p. 65). IRWD determined—in the WSA for the 2017 SEIR as well as in its 2015 Urban Water Management Plan—that it has sufficient forecast water supplies over the 2020-2035 period to meet water demands in its service area for three consecutive dry years. The 2017 TLSP SPA permitted development of 2,212 additional residential units and about 1.7 million fewer square feet of nonresidential land uses than the Adopted TLSP. The anticipated net decrease in impervious surfaces would reduce impacts to groundwater recharge. Projects developed pursuant to the 2017 TLSP SPA would be required to implement LID measures, thus reducing impacts to groundwater recharge. The 2017 SEIR determined that buildout would not result in a substantial new impact on groundwater recharge. This topic was not carried forward in the 2017 SEIR.

Hydrology

Planning Area 20 was designated as a 100-year flood zone by the Federal Emergency Management Agency (FEMA). Peters Canyon Channel was also identified as a 100-year flood zone. The remainder of the TLSP area was determined to be outside of 100-year flood zones. TLSP development would require storm drainage improvements to reduce flood hazards in Planning Area 20. Impacts were identified as less than significant in the certified FEIS/EIR.

Implementation measures included in the 2004 Supplemental EIR required drainage studies and that projects make fair-share contributions to the Orange County Flood Control District for construction of flood control facilities required by the affected projects. No substantial change from previous analysis was identified in the 2006 Addendum.

In 2004, a Master Runoff Management Plan for Tustin Legacy (RBF Consulting) was approved by the City of Tustin. The Master Plan covered the ultimate buildout of the Tustin Legacy property, including all 22 Planning Areas and their ultimate land uses—e.g., residential, mixed use, commercial, and park space. A master backbone storm drain system was designed and sized to accommodate the ultimate buildout peak flow for each Planning Area and land use. The design of the master storm drain system also includes significant detention systems to control and manage downstream peak flows. Since the approval of the Master Plan, much of the backbone storm drain infrastructure and detention systems have been constructed.

Current Conditions

IRWD supplies water to the TLSP area. IRWD potable water supplies consist of groundwater and treated imported water from northern California and the Colorado River. Since the 2017 TLSP SPA was approved, IRWD's Draft 2020 Urban Water Management Plan (UWMP) has been prepared in accordance with the California Urban Water Management Planning Act (Act) and other applicable laws. On June 28, 2021, IRWD's Board of Directors conducted a public hearing and adopted IRWD's 2020 UWMP, the proposed Water Shortage Contingency Plan, and proposed Addendum to IRWD's 2015 UWMP. The UWMP determined that it has adequate supplies to accommodate existing and planned water demand for their service area, which includes the TLSP area.

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR.

Requirements for waste discharge from construction sites into stormwater were expanded in 2022 when the State Water Resources Control Board issued a new Statewide Construction General Permit (CGP) (Order 2022-0057-DWQ) and an amendment to the 2012 Permit (Order 2012-0006-DWQ). Under the 2022 CGP, SWPPPs are required to be prepared for projects exceeding an acre in size. Since 2009, SWPPPs must estimate sediment risk to receiving waters in addition to BMPs that must be implemented by a construction project. Additional BMPs are required as sediment risk to receiving waters increases.

All projects of one acre or more would be required to prepare and implement SWPPPs. The SWPPP would be reviewed on a project-by-project basis as individual development projects are proposed. No new substantial water quality impact would result from construction pursuant to the TLSP Amendment.

Requirements for waste discharge from developed land uses into stormwater were expanded in 2009 through the municipal stormwater permit (MS4 Permit, Order No. R8-2009-0030) issued by the Santa Ana RWQCB. The Orange County MS4 Permit, Order No. R8-2009-0030, NPDES Permit No. CAS618030, as amended by Order No. R8-2010-0062, is currently in effect for permittee entities within the County of Orange, which includes the City of Tustin. The previous orders, including Order No. R8-2002-0010, have been rescinded except for enforcement purposes for violations that occurred when they were in effect. The MS4 Permit requires low-impact development (LID) measures intended to preserve a site's predevelopment hydrology by minimizing the loss of natural hydrologic processes such as evapotranspiration, and runoff detention. LID measures introduce structural and nonstructural design components that restore these water quality functions into the project's land plan. The design and operations phases of projects developed pursuant to the Project would comply with requirements in the MS4 Permit and would comply with additional requirements in the drainage area management plan issued by OC Public Works in 2003. A water quality management plan will be prepared for development projects pursuant to the MS4 Permit and subsequent projects will be required to comply with existing regulatory permitting processes.

Therefore, no new significant impact would occur. This topic will not be carried forward in the SEIR.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Change in Project Requiring EIR Revisions. The IRWD supplies water to the TLSP area. The Project site overlies the Irvine Subbasin of the Orange County Groundwater Basin. The proposed TLSP SPA buildout may increase water demands onsite due to the increased number of residential units proposed. Further evaluation in the SEIR is required to determine whether there would be new significant impacts to groundwater supplies. This topic will be further analyzed in the SEIR.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in a substantial erosion or siltation on- or off-site?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Major storm drainage channels and storm drains in and surrounding the site include Peters Canyon Channel extending through the eastern part of the TLSP area; Barranca Channel along the southern TLSP area boundary; the Santa Ana-Santa Fe Channel just north of the north TLSP area boundary; and the Barranca Storm Drain in Red Hill Avenue along the west site TLSP area boundary. Storm drains in the part of the

TLSP area east of Peters Canyon Channel drain to Peters Canyon Channel. The main storm drain systems onsite are in the western part of the TLSP area and drain to the Barranca Channel.

As previously discussed, construction projects pursuant to the Project would prepare and implement SWPPPs specifying BMPs to be used in those projects, including erosion control and sediment control BMPs. Implementation of erosion control and sediment control BMPs would ensure erosion impacts do not occur from construction activities.

Buildout of the TLSP would include development of a new drainage system for the site and would require improvements to Peters Canyon Channel, Barranca Channel along the south site boundary, and to the Santa Ana-Santa Fe Channel along the north site boundary. Consistent with the 2017 SEIR analysis, future development projects developed pursuant to the TLSP and proposed TLSP SPA would comply with requirements of the Orange County MS4 permit (MS4 Permit, Order No. R8-2009-0030) issued by the Santa Ana RWQCB, and the drainage area management plan issued by OC Public Works. Compliance with requirements of the aforementioned permit and plan, including LID requirements described above in Section 5.9.2.b, would limit rates and volumes of runoff from the site. Therefore, no new significant impact would occur. This topic will not be carried forward in the SEIR.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Project area extends over FEMA FIRM maps 06059C0279J and 06059C0283J. Peters Canyon Channel is mapped as a 100-year flood zone (Zone A) by FEMA. Much of the eastern half of the portion of the site in the City of Tustin is mapped as a 500-year flood zone (Shaded Zone X) by FEMA (Federal Emergency Management Agency, 2009). There have been no changes made to the FEMA FIRM maps for the Project area since approval of the 2017 TLSP SPA.

Project would increase the cap for residential units within Neighborhoods D South and G and revise proposed land uses in Neighborhood D North to allow for 555 residential units in an area previously planned for nonresidential land uses. Although the Project would allow for intensification of density, the Project would not change the overall development footprint of the TLSPTLSP. Neighborhood D North is partially mapped as a 500-year flood zone (Shaded Zone X), while the remainder of the neighborhood has been determined to be outside of the 0.2 percent annual chance floodplain (Unshaded Zone X). Therefore, the Project would not place housing or structures in a 100-year flood zone, and no new substantial impact would occur.

As part of the 2004 Master Runoff Management Plan for Tustin Legacy, described above, peak flow discharges and storm drain sizes were determined for each Planning Area based on their full buildout condition (commercial, residential, etc.). Prior to approval of individual projects within Tustin Legacy, each project must demonstrate that the proposed project peak flows are equal to or less than the ultimate condition peak flows in the master plan. For projects that will only occupy a portion of a Planning Area, the runoff management plan includes subareas with detailed hydrology calculations and peak flow limits to ensure the full buildout of the Planning Area will remain within the total allowable discharge. This analysis is reviewed and approved by the City of Tustin.

As part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood G. The remaining Planning Areas will remain unchanged. The net increased allowance in residential units could increase the net acreage of residential development across all three neighborhoods. However, all projects built within TLSP area will still be required to demonstrate that the project peak flow

runoff is equal to or less than the assumed peak flow conditions associated with the 2004 Runoff Management Plan for Tustin Legacy. The projects would also need to comply with permit conditions within the County's MS4 permit, which requires implementation of LID to avoid potential flooding. Therefore, there are no new anticipated impacts related to hydrology. Therefore, no new significant impact would occur. This topic will not be carried forward in the SEIR.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Change in Project Requiring EIR Revisions. The Modified Project would increase the allowed residential capacity within the Neighborhoods of D North, D South, and G by 2,211 residential units, which would allow for intensified future development of the Modified Project site. Therefore, the Modified Project could result in increased stormwater runoff that could exceed the anticipated capacity of the storm sewer system for future buildout of the Modified Project site. Therefore, this topic will be further analyzed under the SEIR.

iv. impede or redirect flood flows?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. As discussed above, the Project would not place housing or structures in a 100-year flood zone, and no new substantial impact would occur.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. A seiche is a surface wave created when an inland water body is shaken, usually by an earthquake. There are no inland water bodies onsite or near enough to the Project area to pose a substantial flood hazard onsite due to a seiche.

A tsunami is a sea wave caused by a sudden displacement of the ocean floor, most often due to earthquakes. The Project site is approximately 7.6 miles inland from the Pacific Ocean, and elevations onsite range from about 51 feet at the southwest corner of the site to 80 feet at the northwest corner. Therefore, buildout of the Project would not place people or structures at risk of flooding due to tsunami.

A mudflow is a landslide composed of saturated rock debris and soil with a consistency of wet cement. There is no risk of mudflow onsite due to the nearly flat topography of the site. Therefore, no new significant impact would occur. This topic will not be carried forward in the SEIR.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Change in Project Requiring EIR Revisions. The IRWD supplies water to the TLSP area. The Project site overlies the Irvine Subbasin of the Orange County Groundwater Basin. The proposed TLSP SPA buildout may increase water demands onsite due to the increased number of residential units proposed. Further evaluation in the SEIR is required to determine whether there would be new significant impacts to groundwater supplies, and further, obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, this topic will be further analyzed under the SEIR.

5.11 LAND USE AND PLANNING

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Physically divide an established community?	☐	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐	☐

Prior Environmental Findings

The certified FEIS/EIR determined that the project required amendments to the General Plan and Zoning Ordinance to provide consistency with the general plan and zoning designations in the cities of Tustin and Irvine. It found that the intensification and change of land uses pursuant to the MCAS Tustin Specific Plan could create land use incompatibilities with surrounding land uses and internal incompatibilities within the Project area. Implementing Actions were incorporated to mitigate this impact by addressing compatibility through processing of land use plans and amendments consistent with the applicable general plans and zoning ordinances. These mitigation measures included Mitigation LU-1, which required the City of Tustin General Plan and zoning ordinance to be consistent with the planned land uses and to ensure the overall appearance of the development on site is similar to other master planned areas in Tustin and other adjacent cities. Similarly, Mitigation Measure LU-2 requires the City of Irvine General Plan and Zoning Ordinance to be amended to be consistent with the panned land uses and to ensure the overall appearance of the development on site is similar to other master planned areas in Tustin and other adjacent cities.

In 2001, the City of Tustin adopted a General Plan land use designation "MCAS Tustin Specific Plan," and the MCAS Tustin Specific Plan was adopted on February 3, 2003 (Ordinance 1257). As described previously, the MCAS Tustin Specific Plan established the zoning designations, development standards, and entitlement framework for future development in the Specific Plan area.

The 2017 TLSP SPA amended the Adopted Specific Plan to change the mix of land uses and internal circulation. The TLSP Amendment was prepared to facilitate development of the remaining undeveloped Specific Plan area in the City of Tustin. These remaining parcels would be sold, leased, or developed by the City. Eventually these parcels would be developed by a number of landowners within the framework established by the TLSP. Additionally, the TLSP Amendment included changes in land uses for the remaining Planning Areas 8 through 19, which resulted in 2,212 more residential units and 1,755,306 fewer SF of non-residential land use within the TLSP.

Current Conditions

Refer to Section 2.2, *Existing Land Use*, above for a description of existing development.

a) Physically divide an established community?

No Impact. The proposed TLSP SPA would not divide an established community. The Project would increase allowable density and change the mix of land uses in the proposed land use plan; however, the footprint of the TLSP would not be altered by the Project. The aforementioned necessary revisions to land use plans and

amendments consistent with the applicable general plans and zoning ordinances have been since been completed. The TLSP SPA would increase the allowable number of residential units within Neighborhood D South and Neighborhood G, which currently allows residential mixed land use under the Approved Project. The TLSP SPA would amend Neighborhood G land uses to allow residential where previously only commercial, office, and institutional land uses are currently allowed under the approved TLSP. However, the introduction of residential land use would not result in division of an established community, as each project would be designed so as not to divide established neighborhoods within the Project area. The TLSP area is surrounded by existing development and would not physically divide an established community. Therefore, no new significant impact would occur. This topic will not be carried forward in the SEIR.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Change in Project Requiring EIR Revisions. The current land use plan governing the Project area is the TLSP as most recently amended by the City of Tustin in 2017. The TLSP Amendment would amend the Adopted TLSP, as described in Section 3.2, *Project Characteristics*, to change the mix of land uses and internal circulation. An SEIR is being prepared that will analyze whether the TLSP Amendment is consistent with the City's General Plan and zoning ordinance or result in any new environmental impacts related that would conflict with City policies or regulations. Further evaluation will be provided in the SEIR.

5.12 MINERAL RESOURCES

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☐	☒

Prior Environmental Findings

No mineral resources valuable to the region or the state or identified in the general plans of the cities of Tustin or Irvine, were identified in the certified FEIS/EIR. No impacts to mineral resources are identified in previous environmental documents.

Current Conditions

There are no changes to current conditions with respect to mineral resources onsite since it was evaluated in the FEIS/EIR.

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. In order to protect the availability of mineral resources of value, the California Department of Conservation identifies sites to which continuing access is important to satisfying mineral production needs of the region and the State. The relative importance of potential mineral resource sites is indicated by inclusion in one of four Mineral Resource Zones (MRZ):

MRZ 1: No mineral resources
MRZ 2: Significant resource area (quality and quantity known)
MRZ 3: Significant resource area (quality and quantity unknown)
MRZ 4: No information (applies primarily to high-value ores)

The Project site is mapped Mineral Resource Zone 1 (MRZ-1) on the Mineral Land Classification of Orange County, California, indicating that no significant mineral resources are known to be present or there is little likelihood they may be present (California Geological Survey, 1994). As determined in the certified FEIS/EIR, no new impact would occur. This topic will not be carried forward in the SEIR.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on the general plan, specific plan. or other land use plan?

No Impact. No mining sites in the City of Tustin are identified in the City's General Plan (City of Tustin, 2018). As determined in the certified FEIS/EIR, no impact would occur. This topic will not be carried forward in the SEIR.

5.13 NOISE

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☐	☒

Prior Environmental Findings

The certified FEIS/EIR determined that noise impacts would be significant if noise levels for sensitive receptors exceeded noise criteria established in the noise elements of the general plans for the cities of Tustin, Irvine, and Santa Ana. Sensitive receptors are residences, schools, libraries, hospitals, and recreational areas. The FEIS/EIR identified that an increase of 3 dB over existing noise levels experienced by a sensitive receptor would be a significant impact.

The FEIS/EIR determined that the increase in traffic levels would not result in a significant impact to roadways surrounding the Specific Plan area. However, significant noise impacts were found for residents near the extension of Tustin Ranch Road to Von Karman Avenue and to residential and park uses adjacent to Warner Avenue between Harvard and Culver Drive.

The FEIS/EIR found that future sensitive receptors developed in accordance with the Specific Plan would incorporate applicable regulations and impacts would be less than significant.

The FEIS/EIR determined that there would be a significant impact to existing onsite housing planned for reuse. Mitigation measures were incorporated to reduce noise levels below 65 dB to less than significant levels.

The 2004 Supplemental EIR analyzed the extension of Tustin Ranch Road between Walnut Avenue and the Future Alignment of the Valencia North Loop. It determined that short-term construction noise impacts would be less than significant. It identified a significant impact to sensitive receptors along Tustin Ranch Road. Mitigation Measure MM N-1, requiring installation of a sound wall, reduced this impact to less than significant. This sound wall has been constructed.

The 2006 Addendum recognized that minor internal changes to the roadway network would change noise levels for land uses near the roadways. However, it found that there were no new significant short-term construction-related or long-term traffic noise impacts and that mitigation measures from the FEIS/EIR would apply.

Under the 2017 SEIR, one new noise impact was identified, traffic noise impacts along Moffett Drive from Park Avenue to Sonora Street/Meridian Way and along Valencia Avenue from Tustin Ranch to Park Avenue would increase noise impacts compared to the Adopted TLSP (2017 Draft SEIR, p. 5.4-20). However, the analysis found that with application of noise mitigation measures from the FEIR/EIS and 2004 SEIR, which includes various noise buffering construction techniques and future construction of a soundwall along Tustin Ranch Road, impacts were determined to be less than significant with mitigation.

Current Conditions

The noise environment described in the FEIS/EIR has not changed. Major noise sources on or near the TLSP area include vehicular traffic along surrounding major roadways, the railroad along Edinger Avenue, and aircraft noise from John Wayne Airport located two miles to the southwest. The TLSP area is not within a 60 dB CNEL noise contour from John Wayne Airport.

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Change in Project Requiring EIR Revisions. As part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood G. The remaining Planning Areas will remain unchanged. The Project would permit development of a net increase of 4,970 residential units compared to the Adopted TLSP. The addition of residential units and residents could result in an increase in ambient noise levels due to an increase in traffic volumes generated by the Project. A noise study would be prepared for the Project to determine whether the Project would result in significant impact on temporary or permanent increases in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance. This topic will be further analyzed within the SEIR.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Change in Project Requiring EIR Revisions. The proposed Project has the same development impact area that was analyzed in the FEIS/EIR and 2017 SEIR, and therefore, railroad and construction-related vibration would generally be the same. However, as discussed above, implementation of the Project would introduce additional residents, which may expose sensitive receptors to increased exposure to groundborne noise or vibration. A noise study will be prepared, and this issue will be further evaluated in the SEIR.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project area to excessive noise levels?

No Impact. There are no aircraft operations at the former MCAS Tustin, and the TLSP area is not within the 60 CNEL noise contour for airport operations at John Wayne Airport (Mestre Greve 2013). Therefore, the Project would not expose people residing or working in the Project site to excessive noise levels from airport operations. This topic will not be further analyzed within the SEIR.

5.14 POPULATION AND HOUSING

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☒	☐	☐	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☐	☒

Prior Environmental Findings

The certified FEIS/EIR found that development of the Adopted Specific Plan would have resulted in a total population of 12,514, (10,900 in Tustin), resulting in a net population increase of approximately 9,350 persons. The FEIS/EIR analyzed the demolition of the barracks units and conversion to civilian use. Buildout of the Adopted Specific Plan allowed 4,601 residential units, including the 1,537 converted or replaced units. In addition, the FEIS/EIR found that buildout would have resulted in about 24,500 net new jobs, or a net increase of approximately 24,500 jobs. In addition, the Project was expected to generate 15,081 indirect jobs. The FEIS/EIR concluded that the increase in population, housing, and employment due to the implementation of the Adopted Specific Plan was a beneficial impact because it would fulfill an identified shortfall in housing and meet the goals of the Project to generate jobs.

The FEIS/EIR determined that there would be no adverse impact related to the jobs/housing balance. It was determined that the majority of new jobs would be filled by existing residents within Orange County, and enough new housing would be provided for employees residing outside of the County. No significant impact was identified.

The 2006 Addendum updated the demographic data and growth projections for the City of Tustin and County of Orange using the 2004 Orange County Projections (OCP 2004). OCP 2004 includes buildout projections assumed for the Adopted Specific Plan. The changes in projections showed an increase in population and employment in Tustin with a slightly lower housing stock, indicating a larger household size.

The 2006 Addendum determined that there would be a reduction of 879 employees and an increase of 21 residential units and 24 residents. The 2006 Addendum determined that these small changes in employment, housing, and population would not result in any new significant impacts. Further, the Project would have a similar impact on the jobs/housing balance countywide.

The 2017 TLSP SPA was anticipated to result in the construction of 6,813 residential units and 9,532,419 square feet of nonresidential building space. The 2017 TLSP SPA was therefore found to result in an overall increase of 2,212 dwelling units and a decrease of 1,755,306 square feet of building space. The 2017 SEIR determined that buildout of the 2017 TLSP SPA would increase the Project area's population by an estimated 6,526 additional residents compared to the Adopted Specific Plan, which was estimated to generate 9,374 residents. This represents an increase of 69.6 percent increase from the Adopted Specific Plan. The additional 6,526 residents that would be generated in Tustin upon buildout of the Modified Project would exceed the amount of growth anticipated to occur in the City by regional projections: 4,616 more residents than CDR projections for 2035, 4,394 more residents than SCAG's projection for 2035, and 4,494

more residents than SCAG's projection for 2040. Furthermore, additional residents generated by the Modified Project compared to those generated by the Adopted TLSP would represent 79.5 percent of the population growth anticipated for buildout of the City by the Tustin General Plan. Based on all three of these metrics, the Modified Project would induce substantial growth in the area beyond that studied in the Certified EIR. However, Orange County remains a jobs-rich region, and housing proposed by the Modified Project would result in a beneficial impact to the region related to the balance of jobs and housing. The 2017 SEIR also determined that buildout of the 2017 TLSP SPA would result in a jobs-housing ratio of 2.76 (18,802 total jobs). Although both scenarios are exceptionally job-rich, the 2017 TLSP SPA was found to be substantially more balanced than the Adopted TLSP, which had a jobs-housing ratio of 5.11 (23,621 total jobs). The 2017 SEIR determined that the comparatively more housing-rich 2017 TLSP SPA is consistent with SCAG's intent to place more housing in jobs-rich portions of Orange County, which is jobs-rich. Implementation of the 2017 TLSP SPA was found to result in a less than significant impact relating to population growth.

Current Conditions

The TLSP area is currently developed with 818 residential units, including 33 density bonus units in Neighborhood G. Additionally, The Landing at Tustin Legacy (by Brookfield Residential) is entitled for 400 above-moderate-income residential units planned in Neighborhood D South. The Project is currently under construction.

Commercial buildout within the TLSP includes 1,443,000 SF of Community Commercial, and 95,200 SF of Neighborhood Commercial in Neighborhoods D North and G, respectively.

a) Induce substantial unplanned population growth in an area, either directly or indirectly?

Change in Project Requiring EIR Revisions. As part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood G. The remaining Planning Areas will remain unchanged. The Project would permit development of a net increase of 4,970 residential units compared to the Adopted TLSP. Further evaluation in the SEIR is required to determine whether this increase in housing and population would induce growth and change the conclusions of the 2017 SEIR. Therefore, this topic will be further analyzed within the SEIR.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project would not displace residents. The Project proposes to increase the number of developable residential units within the Project site. No impact would occur.

5.15 PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
i) Fire protection?	☒	☐	☐	☐	☐
ii) Police protection?	☒	☐	☐	☐	☐
iii) Schools?	☒	☐	☐	☐	☐
iv) Parks?	☐	☐	☐	☒	☐
v) Other public facilities?	☒	☐	☐	☐	☐

Prior Environmental Findings

Fire Protection

The certified FEIS/EIR determined that implementation of the Specific Plan would require additional firefighting personnel and equipment at existing fire stations. However, it found that buildout would not require new or expanded fire stations. All development projects would be required to meet Orange County Fire Authority (OCFA) regulations, and impacts were determined to be less than significant.

Subsequent to the certification of the FEIS/EIR, in May 2003, the Navy Disposal Plan transferred to the City of Tustin a 1.25-acre site at Edinger Avenue and the West Connector for construction of the new fire station. The fire station would be funded through development in Tustin Legacy and in the City of Irvine within the former MCAS Tustin.

Subsequently, OCFA re-evaluated its need for fire protection facilities with respect to response times and determined it needed to move Station No. 37 to a new location in the Specific Plan area. In March 2005, the City entered into a Memorandum of Understanding with OCFA for a new fire station at Tustin Legacy.

The 2006 Addendum found that the project would place a similar demand for fire protection services as the original project and that the fire station proposed in the Specific Plan area would meet the needs of the project. As determined by the FEIS/EIR, future projects would be required to comply with all OCFA regulations.

At the time the 2017 TLSP SPA was approved, OCFA Fire Station #37 at Edinger Avenue and Kensington Park Drive had been completed. The 2017 TLSP SPA was anticipated to result in an increase of 2,212 residential units and a decrease of approximately 1.7 million square feet of nonresidential uses. Although the project would result in an increase in demand for fire protection due to the resulting increase of 6,371 residents, there would be a decrease of 1.7 million square feet of nonresidential uses offsetting the increase in demand. With the construction of the new fire station (Station 37) within the TLSP area, the 2017 SEIR Initial Study found that no other new or expanded off-site fire protection facilities were determined to be required (2017 TLSP Initial Study, p. 82). The 2017 TLSP SPA was required to meet OCFA regulations and standard conditions. No new significant impacts were identified.

Police Services

The certified FEIS/EIR determined that implementation of the Specific Plan would increase the demand for police services in the cities of Tustin and Irvine. The FEIS/EIR identified the need for two additional patrol units and three additional investigative units in the Tustin Police Department, and two additional sworn officers in the Irvine Police Department. However, it found that buildout would not require new or expanded police facilities and impacts would be less than significant. The 2006 Addendum found similar impacts with respect to police services and no new impacts were identified.

The 2017 SEIR Initial Study found that although the 2017 TSLP SPA anticipated increase of 6,371 residents would result in an increase in demand for police protection, this would be offset by the reduction in approximately 1.7 million square feet of nonresidential uses (2017 TLSP Initial Study, p. 83). Service level impacts are anticipated to be similar to that analyzed in the FEIS/EIR. No new police facilities were determined to be needed and no significant physical impacts were identified. Additionally, developers are required to coordinate with the Tustin Police Department prior to project approval to ensure adequate security precautions and design features are in place. No new significant impacts are anticipated.

Schools

The TLSP is within the service areas of the Tustin Unified School District (TUSD), Irvine Unified School District (IUSD), and Santa Ana Unified School District (SAUSD). TUSD serves the majority of the TLSP area, including Planning Areas 1, 2, 4-5, 6, 7, 8, 15, 16-19, and a portion of 13-14. IUSD serves a portion of Planning Area 15 and development east of Jamboree Road (Planning Areas 20, 21, and 22). SAUSD serves Planning Area 9-12 and a portion of Planning Area 13-14.

The 2017 SEIR found that the additional residential units as a result of the 2017 TLSP SPA would generate about 1,250 additional students within TUSD boundaries. The addition of 1,250 students to the schools serving the Project area has the potential to exceed the available capacity for some schools if all development were to occur at the time of project approval. The need for additional services is addressed through compliance with school impact fee assessment. Several school facilities were planned for the TLSP area at the time the 2017 SEIR was being prepared, including an expansion of the existing Heritage School enrollment capacity from 600 students to 900 students; development of a 40.03-acre site to house Legacy Academy, a 6–12 magnet science, technology, engineering and math (STEM) school; development of an alternative education facility, and possible development of additional District administrative facilities. The 2017 SEIR determined that the planned facilities would be able to accommodate anticipated demand. Therefore, the 2017 SEIR determined that the project would have a less than significant impact on school facilities (2017 Draft SEIR, p. 5.6-9).

Parks

See Section 5.16, Recreation, for prior environmental background.

Libraries

The certified FEIS/EIR identified three public libraries within three miles of the TLSP area. It found that implementation of the TLSP would not require construction of a new library facility, and impacts were less than significant. Subsequently, Orange County Public Library (OCPL) entered into an agreement with the City of Tustin to expand the Tustin Branch Library in the Tustin Civic Center. The Project was approved in September 2005 and evaluated in a mitigated negative declaration (SCH 2002041001) adopted May 2002. In 2009, the new 32,000-square-foot library opened, replacing the 15,000-square-foot facility built in 1974. The new library has a book capacity of 209,000 volumes.

The 2017 SEIR Initial Study determined that the 2017 TLSP SPA would add 4,609 residents (2,212 dwelling units) to the site compared to the Adopted TLSP, resulting in a total of 17,859 residents. The FEIS/EIR estimated that the Adopted TLSP would generate a demand for approximately 2,500 square feet of library

space, or 0.2 square foot per person. The 2017 TLSP SPA would generate demand for a net increase of 922 square feet of library space, or 3,572 square feet total at buildout. The Tustin Library increased its facilities by 14,000 square feet in 2009. Therefore, the additional demand of 922 square feet was accommodated by the existing library facilities and would not require the construction of a new or expanded facility (2017 TLSP Initial Study, p. 84). No new significant impacts were identified.

Current Conditions

TLSP continues to be served by Tustin and Irvine police and fire protection services. No changes to facilities have been made since adoption of the 2017 TLSP SPA. Prior to adoption of the 2017 SEIR, the OCFA and City completed construction of Fire Station 37 in 2014, located at 15011 Kensington Park Drive, which serves the TLSP area.

TUSD has already completed construction of Heritage Elementary School, a 10-acre site located in Neighborhood A. The first phase of a 40-acre middle school and high school, Legacy Magnet Academy, at the southwest corner of Tustin Ranch Road and Valencia Avenue in Neighborhood D was completed in 2020. This site was a conveyance agreement and grant deed agreement between the City and TUSD.

Located in Neighborhood H, on the northwest corner of Barranca Parkway and Harvard Avenue, IUSD has a small campus called the Creekside Education Center. Creekside High School and Irvine Adult School are both located on this approximately 20-acre site.

For park information, see Section 5.16, recreation, below.

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for:

i, ii, iii, and v.

Change in Project Requiring EIR Revisions. As part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood G. The remaining Planning Areas will remain unchanged. Future buildout of proposed additional units would result in an increase in the number of residents, and subsequently, an increase in demand for fire protection, police, school, park, and library services. Additional data, coordination, and analysis is needed to determine the existing and future operation of these public services. Therefore, this topic will be further analyzed within the SEIR.

iv. Parks?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios. See Response 5.16 a) in Section 5.16, Recreation, below. This topic will not be carried forward in the SEIR.

5.16 RECREATION

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒	☐

Prior Environmental Findings

The certified FEIS/EIR evaluated recreational impacts of the Specific Plan that included 126 acres of public parkland, including 118 acres in the City of Tustin (84.5-acre regional park, 24.1-acre community park, and two 5-acre neighborhood parks) and an 8-acre neighborhood park in the City of Irvine. The FEIS/EIR found that the 118 acres of public parkland in Tustin was well over the requirement established by the City's municipal code (three acres of park per 1,000 residents). It determined that the provision of approximately 126 acres of parkland would result in a beneficial impact related to the provision of parks. Construction and operation of the proposed parks were also evaluated throughout the FEIS/EIR, and mitigation measures were identified.

The FEIS/EIR analyzed proposed Class I and II bikeways, riding and hiking trails proposed in the Adopted Specific Plan. Physical impacts of trail construction were identified throughout the FEIS/EIR along with the development areas. These recreational facilities were determined to be a beneficial impact to the project.

The 2006 Addendum identified an increase in parkland to 202 acres of public parks, an increase of 76 acres of public parkland compared to the original Specific Plan evaluated in the FEIS/EIR. The 2006 Addendum evaluated the elimination of a 159-acre private golf course that was originally proposed and determined that it would not have been completely accessible to the general public and may have resulted in increased environmental impacts. The Specific Plan would result in a beneficial impact related to recreation with a new community park and linear park system providing a focal point for the community. The 2006 Addendum identified a number of individual development projects that have been approved and provided additional private recreation facilities not originally envisioned in the Specific Plan.

The 2006 Addendum determined that the Specific Plan would exceed the parkland dedication requirement and would not generate an increase in the use of existing recreational facilities. Additionally, it determined that the changes proposed in the bikeway and trail system would have a beneficial impact.

The 2017 SEIR Initial Study determined that the project would add approximately 6,371 residents, requiring an additional 19.1 acres of parkland within the Specific Plan area at buildout. The 2006 Addendum determined that the Project would result in 12,524 residents, which would require 37.6 acres of parkland. Therefore, the Tustin City Code (TCC) would require approximately 56.7 acres of parkland at buildout. Implementation of the Specific Plan Amendment includes approximately 255 acres of public parks (including the 84.5-acre regional park in Planning Area 6). This exceeds the amount of parkland required by the TCC

and considered in the FEIS/EIR. Since the Specific Plan Amendment would provide ample parkland, the 2017 SEIR Initial Study determined that buildout would not increase the use of existing parks or cause the physical deterioration of existing recreational facilities and no new substantial impact would occur (2017 SEIR Initial Study p. 86).

Current Conditions

Within the City of Tustin, the proposed project includes a requirement from the City's General Plan for public open space of approximately 170 acres. The TLSP contains existing park area shown below in Table 5-2, Tustin Legacy Public Parks. The Specific Plan provided for a 32-acre sports park in the northwest portion of the Plan area in the City of Tustin, which was completed in 2020. Additionally, several other smaller park areas have been developed in accordance with the TLSP since adoption of the 2017 TLSP SPA. There is currently a total of 93 acres of parking space provided in the TLSP area.

Table 5-3: Tustin Legacy Public Parks

Planning Area	Neighborhood	Type	Existing Park Acres	Future Park Acres
2	B	Community Park	32	-
4–5	B	Parkettes	4	-
6 (County)	C	Urban Regional Park	-	85
9–12	E	Tustin Legacy Park Overlay	28	
8, 13–14	D	Parkettes, Tustin Legacy Park Overlay	-	76 *
15	G	Neighborhood Parks, Parkettes, Tustin Legacy Park Overlay	13	12 *
20	G	Parkettes	1	-
21	G	Neighborhood Park	7	-
22 (Irvine)	H	Neighborhood Park (Sweet Shade Park)	8	-
		Total:	**93**	**173**

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would be accelerated?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. As summarized in Table 5-2, the TLSP contains 173 acres of planned future park space in addition to the existing 93 acres of existing park. The proposed increase in residents would not result in the substantial physical deterioration of existing facilities.

As part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood G. The remaining Planning Areas will remain unchanged. Therefore, the total increase in number of units within the TLSP proposed by the Project is 4,970 residential units. Utilizing the same number of persons per household used within the 2017 SEIR (2.88 persons) based on the City of Tustin average household size and occupancy rate, the Project would be anticipated to result in an increase of 12,891 residents at full buildout.

The City municipal code requires the dedication of 3 acres of parkland per 1,000 residents. The Project would add approximately 12,891 residents, requiring an additional 38.7 acres of parkland within the TLSP area at buildout. The 2017 SEIR determined that the Project would result in 6,371 new residents and would require approximately 56.7 acres of parkland at TLSP buildout. Therefore, the new total park acreage required for Project buildout would be 95.4 acres of parkland. Implementation of the TLSP includes approximately 255 acres of public parks (see Table 5-2). This exceeds the amount of parkland required by the TCC and considered in the FEIS/EIR. Since the Specific Plan Amendment would provide ample parkland, buildout would not increase the use of existing parks or cause the physical deterioration of existing recreational facilities. No new substantial impact would occur. This topic will not be carried forward in the SEIR.

b) Require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Project would increase the demand for park facilities due to the increase in 4,970 residential units and approximately 12,891 residents. Within the City of Tustin, the proposed Project includes a requirement from the City's General Plan for public open space of approximately 170 acres. Additionally, Tustin Municipal Code Section 9331(d) requires that subdividers of residential developments dedicate land to the City for park development, make payments in lieu of land dedication, or some combination thereof. As stated, the TCC requires dedication of 3 acres per 1,000 residents; the amount of land to be dedicated per residential unit ranges from 0.0067 acre to 0.0102 acre depending on the type and density of the units.

The Project would add approximately 12,891 residents, requiring an additional 38.7 acres of parkland within the TLSP area at buildout, based on 3 acres per 1,000 residents. As summarized in Table 5-2, the TLSP contains 173 acres of planned future park space in addition to the existing 93 acres of existing park. The 2017 TLSP SPA Park Plan provides a linear park that extends through the site from the west corner to the transit station to the east, which creates connectivity for the community and proposed school locations. Future residential development would also construct private parks with each community. Although there would be an increase in population, resulting in an increased demand for park facilities, there are ample parks proposed in Adopted 2017 TLSP.

Construction and operation of the proposed parks and recreation facilities would occur within the development footprint analyzed in the FEIS/EIR. Park construction and its environmental effects were analyzed throughout the FEIS/EIR, and subsequent environmental documentation. Mitigation would not be required. Expansion of recreational facilities would not be necessitated by the proposed Project. Therefore, the Project would not result in any new or substantially more severe impacts. This topic will not be carried forward in the SEIR.

5.17 TRANSPORTATION

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☒	☐	☐	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☒	☐	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒	☐
d) Result in inadequate emergency access?	☒	☐	☐	☐	☐

Prior Environmental Findings

Level of Service

The certified FEIS/EIR determined that Adopted Specific Plan buildout was estimated to generate 216,445 average daily vehicle trips (ADT), over 97 percent of which would originate in the portion of the site in the City of Tustin.

The 2013 Amendment was forecast to result in potentially significant impacts to seven arterial intersections in the interim condition and 18 in the Year 2020. Mitigation measures were identified for all significant impacts. Proponents of development projects in the area would be required to make fair-share contributions to the cities of Tustin and Irvine and the cities would be responsible for ensuring that the improvements were constructed. The City of Tustin would pass through fees from fair-share funding for impacted intersections in the City of Santa Ana and impacted intersections under the jurisdiction of Caltrans to the appropriate jurisdictions and would coordinate with those jurisdictions regarding completion of those improvements. Even with incorporation of mitigation measures, impacts were determined to be significant and unavoidable under the 2020 With Project conditions for the intersections of Tustin Ranch Road at Walnut Avenue and Jamboree Road at Barranca Parkway. Impacts to all other intersections under the 2020 With Project conditions and all intersections under 2005 With Project conditions were less than significant after mitigation. Additional mitigation measures required phased completion of roadway improvements onsite based on cumulative project-generated ADT.

The 2017 SEIR determined that the 2017 TLSP SPA would not result in a new significant environmental effect or a substantial increase in severity of previously identified significant impacts on intersections previously analyzed based on the peak hour freeway ramp impact thresholds (2017 SEIR, p. 5.7-20). Compared to the Adopted Specific Plan, the 2017 TLSP SPA would have the same or reduced V/C ratio at all deficient intersections except for I-405 at Jamboree (NB Off-ramp). At this ramp, the project trips resulted in a 0.01 V/C increase compared to the previously Adopted Specific Plan, which was not considered a substantial increase resulting in a new significant impact.

Transit

The certified FEIS/EIR determined that the increase in development would create additional demand for transit service. However, the buildout would improve the circulation system, which would improve service for bus routing. No significant impacts were identified on the rail system. No significant pedestrian or bicycle impacts were identified in the FEIS/EIR; however, the planned bicycle trails would provide a benefit to the pedestrian and bicycle facilities.

The 2004 Supplemental EIR identified a potentially significant additional impact at the intersection of Red Hill Avenue at Warner Avenue in the cities of Tustin and Santa Ana. Mitigation was required and implemented, and the impact was determined to be less than significant after mitigation.

The 2006 Addendum did not identify any new significant traffic impacts, and implementation of the Specific Plan analyzed in the 2006 Addendum would avoid the significant and unavoidable impact at the intersection of Tustin Ranch Road and Walnut Avenue under the 2020 With Project conditions. The addendum determined that the total number of trips generated by the Project had not changed and did not exceed the trip caps established by and agreed upon between the cities of Tustin, Santa Ana, and Irvine.

The 2017 SEIR determined that the project would be consistent with the conclusions of the FEIS/EIR, and no new significant impact would occur.

Emergency Access

The 2017 SEIR determined that implementation of the 2017 TLSP SPA would not impede emergency access to surrounding communities and would not result in inadequate emergency access to existing or proposed developments onsite (Placeworks, 2015, p. 97). The proposed circulation plan would provide adequate emergency access to proposed developments onsite. Projects developed pursuant to the project would provide fire access roads conforming with requirements of California Fire Code (California Code of Regulations Title 24 Part 9) Section 503. Such projects would submit site plans and building plans to the OCFA during the plan check process to ensure they meet OCFA regulations regarding emergency access, including turning radii for firefighting vehicles and emergency exit routes from buildings. No new significant impact would occur.

Additionally, the Tustin Police Department oversees emergency management for the City. The City's Emergency Plan was approved in 2011. The 2017 SEIR Initial Study found that the Project would change the mix of land uses but would not be expected be to substantially alter or interfere with the implementation of the City's Emergency Plan (Placeworks, 2015, p. 62).

Current Conditions

The TLSP includes a mobility plan that provides for the needs of pedestrians, bicyclists, motorists, and transit users. The mobility plan is intended to: 1) provide efficient accessibility to the regional and local transportation system; 2) to supply adequate internal circulation capacity; and 3) to efficiently service the proposed land uses. The mobility plan addresses all aspects of the public realm within the public right-of-way, including landscaping, sidewalks, bikeways, parking, and travel lanes.

The TLSP Recreational Bikeway/Trail Concept Plan provides an opportunity to complete vital links necessary for a comprehensive regional system as well as improved local system. There are three planning agencies involved in the implementation and maintenance of the bikeway/trail system for the Plan and adjacent areas: the City of Tustin, Orange County Public Works, and the City of Irvine.

The Orange County Transportation Authority (OCTA) currently provides transit service to and around the TLSP area. Several bus routes and the Metrolink connect Tustin Legacy to the larger Orange County and Los Angeles County areas.

Several development projects within and surrounding the TLSP area have been approved and completed since adoption of the 2017 TLSP SPA. Land use changes have caused changes to baseline conditions regarding vehicle trips and circulation. Additionally, several changes to transit services and transportation infrastructure have been made as a result of development since adoption of the 2017 SEIR. Traffic counts, inventory, and data collection are currently being conducted to determine the existing conditions of the TLSP area.

Another notable change since 2017 occurred regarding the ways in which transportation impacts are analyzed under CEQA. Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the State CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. SB743 specified that the new criteria should promote the reduction of GHGs, the development of multimodal transportation networks and a diversity of land uses. In response, Section 15064.3 was added to the CEQA Guidelines beginning January 1, 2019, with the provisions of the section applying statewide beginning on July 1, 2020. State CEQA Guidelines Section 15064.3, Determining the Significance of Transportation Impacts, states that VMT is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. This has ultimately changed the way in which transportation is analyzed and mitigated under CEQA, which provides a framework for how the City is addressing future traffic concerns, different from past planning practices.

The City of Tustin underwent several General Plan updates in 2018, which included updates to the Circulation Element. A new circulation plan and guiding goals and policies were revised to reflect the City's latest challenges, new state regulations and policies, as well as latest traffic patterns as a result of various land use changes and growth.

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Change in Project Requiring EIR Revisions. As discussed above, the conditions of the TLSP have changed since adoption of the 2017 TLSP SPA. Additionally, a new Circulation Element has been adopted by the City of Tustin. The Project would introduce land use changes and density increases, which could cause additional trips and new impacts to previously analyzed traffic conditions. Therefore, the Project could result in potential impacts and conflicts with a program, plan, ordinance, or policy addressing the circulation system due to new circumstances and Project changes. A traffic impact assessment will be prepared for the Project to analyze potential traffic impacts and consistency with applicable programs, plans, ordinances, and policies. This topic will be further analyzed within the SEIR.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

Change in Project Requiring EIR Revisions. As discussed above, VMT was not analyzed under previous CEQA documentation and was introduced as the new metric for determining traffic impacts in 2018. Therefore, the Project could result in potential impacts and conflicts with CEQA Guidelines § 15064.3, subdivision (b) due to new circumstances and Project changes. A traffic impact assessment will be prepared for the Project to analyze the potential VMT impacts of the proposed Project. This topic will be further analyzed within the SEIR.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. As part of the proposed TLSP SPA, several of the Planning Areas are subject to land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood

G. The remaining Planning Areas will remain unchanged. The Project would permit development of a net increase of 4,970 residential units compared to the Adopted TLSP. Implementation of the Project would not add incompatible uses to area roadways and would not create a hazardous design feature. Minor revisions to the internal circulation system would not result in a design feature that would increase hazards. Therefore, the Project would not result in new circumstances or Project changes that could cause new or substantially more severe significant impacts. This topic will not be carried forward within the SEIR.

d) Result in inadequate emergency access?

Change in Project Requiring EIR Revisions. As discussed above, the Project would result in land use changes and the allowance of increased density within the TLSP Neighborhood D North, D South, and G. Additionally, the City of Tustin has revised their Circulation Element of the General Plan since adoption of the 2017 TLSP SPA. Proposed changes to land use and density under the Project could result in impacts to emergency access of the TLSP area. Additionally, the Project could cause conflicts with the updated Circulation Element. Therefore, impacts to emergency access would be analyzed further following preparation of the traffic impact assessment. This topic will be further analyzed within the SEIR.

5.18 TRIBAL CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☒	☐	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐	☐

Prior Environmental Findings

This topic was not previously analyzed within the certified FEIR/EIS or subsequent environmental documentation for the TLSP.

Current Conditions

Since adoption of the 2017 TLSP SPA, the legislature added the new requirements regarding tribal cultural resources in Assembly Bill 52 (Gatto, 2014). By requiring consideration of tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and tribal governments, public agencies, and project proponents would have information available early in the project planning process to identify and address potential adverse impacts to tribal cultural resources.

Government Codes §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans. Public Resources Codes §21080.3.1 and §21080.3.2 requires public agencies to consult with California Native American tribes identified by the NAHC for the purpose of avoiding, protecting, and/or mitigating impacts to tribal cultural resources as defined, for CEQA projects.

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Change in Circumstances Requiring EIR Revisions.

The City of Tustin is historically affiliated with several California Native American tribes. Records would be reviewed to determine whether any potential resources consistent with the definition of Public Resources

Code Section 21074 are located within the TLSP area. Additionally, the City will conduct coordination with tribes in compliance with AB 52. This topic will be analyzed further within the SEIR.

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Change in Circumstances Requiring EIR Revisions.

The City of Tustin is historically affiliated with several California Native American tribes. Therefore, the City of Tustin is required to notice tribes historically affiliated with the TLSP area, and conduct consultation with tribes who indicate an interest in consulting. Information and measures that result from consultation would be considered and included in the SEIR as applicable. This topic will be analyzed further within the SEIR.

5.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☒	☐	☐	☐	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☒	☐	☐	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☒	☐	☐	☐	☐

Prior Environmental Findings

The certified FEIS/EIR determined that impacts to potable water supply and distribution, reclaimed water supply and distribution, wastewater conveyance and treatment, storm drainage, electricity supply and distribution, natural gas supply and distribution, and solid waste disposal were less than significant with no mitigation required. Utilities would be replaced and sized to accommodate the proposed land uses.

The FEIS/EIR determined that at buildout the Specific Plan would demand 2.8 million gallons per day (mgd) of water and 1.8 mgd of reclaimed water. It would generate 2.5 mgd of wastewater, with a peak flow of 7.7 gallons per day (gpd). All utility infrastructure, including the storm drain system would be designed to adequately accommodate development. Drainage is discussed in Section 5.9, *Hydrology and Water Quality*.

The 2017 SEIR Initial Study determined that wastewater from the Project area is treated at IRWD's Michelson Water Recycling Plant, which has capacity of 28 mgd and residual capacity of about 10 mgd (Placeworks, 2015, p.99). A forecast Phase III expansion of the Michelson plant is planned to increase capacity to 33 mgd by 2025 (IRWD 2014). Any increases in wastewater generation from the Project area would be well within the residual capacity planned for treatment at the Michelson plant. Therefore, impacts regarding exceedance of wastewater treatment requirements of the applicable RWQCB and capacity of the wastewater treatment provider to serve the project's projected demand was found to be less than significant and was not analyzed in the 2017 SEIR.

The 2017 SEIR Initial Study also determined that the project would be consistent with the 2004 Master Runoff Management Plan for Tustin Legacy (Placeworks, 2015, p.100). Runoff rates and volumes from the site after buildout of the Specific Plan Amendment are expected to be reduced compared to buildout of the Adopted Specific Plan due to the conversion of nonresidential uses with greater impervious surface to residential uses with less impervious surface. Additionally, the MS4 Permit establishes increased requirements for detaining, infiltrating, evaporating, or transpiring stormwater onsite. Thus, project buildout would not require construction of additional or expanded storm drainage facilities compared to implementation of the Adopted Specific Plan. Therefore, no substantial changes to the FEIS/EIR were identified.

The 2017 SEIR Initial Study determined that the waste treatment provider, which serves or may serve the Project has adequate capacity to serve the project's projected demand (Placeworks, 2015, p. 101). The slight increase in solid waste was found to be well within the residual capacity of the Frank R. Bowerman and Olinda Alpha landfills. Additionally, the project's waste generation was found to be consistent with all applicable state and local regulations. Therefore, impacts were determined to the less than significant and solid waste generation was not analyzed in the SEIR.

The 2017 SEIR determined that the project would not result in any new impacts, or increase the severity of impacts, with respect to water supply or wastewater treatment facilities.

Current Conditions

There are no changes to the utility providers servicing the TLSP area. Water and wastewater services are provided by Irvine Ranch Water District (IRWD). Wastewater from the TLSP area is treated at IRWD's Michelson Water Recycling Plant, which has capacity of 28 mgd and average wastewater flows of 18 mgd, and thus has residual capacity of about 10 mgd. A forecast Phase III expansion of the Michelson plant is planned to increase capacity to 33 mgd by 2025 (IRWD 2014).

The storm drain system has been improved as discussed in Section 5.9, *Hydrology and Water Quality*. The storm drain plan includes five major drainage areas with main line facilities and improvements to the OCFCD Barranca Channel. The backbone system follows the alignments of the major arterial roadways. The use of retention basins was also considered.

Solid waste services are provided by the Orange County Waste and Recycling and CR&R Waste Services. Electricity is provided by Southern California Edison, and natural gas is provided by Southern California Gas Company. Telephone and cable are provided by AT&T, Cox Cable, and Time Warner.

a – e. Change in Project Requiring EIR Revisions.

The Resource Conservation and Recovery Act of 1976 (United States Code Title 42, Section 6901 et seq.) governs the creation, storage, transport, and disposal of hazardous wastes and operators of hazardous waste disposal sites. AB 939, the Integrated Waste Management Act of 1989 (California Public Resources Code Section 40000 et seq.) requires all local governments to develop source reduction, reuse, recycling, and composting programs to reduce tonnage of solid waste going to landfills. Cities must divert at least 50 percent of their solid waste generation into recycling. Compliance with AB 939 is measured for each jurisdiction, in part, as actual disposal amounts compared to target disposal amounts. Actual disposal amounts at or below target amounts comply with AB 939.

The Project would result in several land use changes. These changes include an overall allowable increase (with potential density bonus units considered) of 2,867 residential units within Neighborhood D North, 755 units within Neighborhood D South, and 1,348 units within Neighborhood G. The remaining Planning Areas will remain unchanged. Proposed additional buildout could result in the need for new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Further analysis will be required under the SEIR to determine whether existing utilities have capacity to serve

the additional potential buildout under the proposed Project. Further, the consistency of the Project with existing laws and regulations would be determined. Therefore, the Project could result in potentially significant impacts and this topic will be further analyzed under the SEIR.

5.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☐	☒

Prior Environmental Findings

This topic was not previously analyzed within the certified FEIR/EIS or subsequent environmental documentation for the TLSP.

Current Conditions

According to the CalFire Fire Hazard Severity Zone Map, the City of Tustin contains very high fire severity zones in the northeast portion of the City. The TLSP is not located within a fire hazard zone (California Department of Forestry and Fire Protection, 2022). In addition, the sites and areas adjacent to the sites are urbanized and do not contain hillsides or other factors that could exacerbate wildfire risks.

a – d. No Impact. The TLSP is not located within a fire hazard zone (California Department of Forestry and Fire Protection, 2022). In addition, the sites and areas adjacent to the sites are urbanized and do not contain hillsides or other factors that could exacerbate wildfire risks. Future residential projects proposed to achieve the City's RHNA, and associated infrastructure improvements, would be located on developed, underutilized sites or on vacant parcels proposed and zoned for mixed use development. Potential fire risk would be evaluated on a site-by-site basis and appropriate measures, if necessary, would be implemented to avoid fire risk. Therefore, the Project would result in no impact on wildfire risk. This topic will not be carried forward in the SEIR.

5.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Change in Project Requiring EIR Revisions	Change in Circumstances Requiring EIR Revisions	New Information Showing Potentially New or Increased Significant Impacts	Less Than Significant Impact. No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐	☐

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The SEIRR previously considered all environmental impacts associated with the implementation of the TLSP as well as mandatory findings of significance. The Project would not expand the area of development and would not impact any natural habitats or other areas inhabited by sensitive species. The proposed Project would comply with mitigation measures to reduce impacts related to riparian, wetland, and other sensitive species to less than significant. Vacant land on site has been graded. No new significant impacts would occur.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Change in Circumstances Requiring EIR Revisions. Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result

from individually minor, but collectively significant, developments taking place over a period. The CEQA Guidelines, Section 15130 (a) and (b), states:

a) Cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.
b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.

The Project would maintain the same development area that was analyzed in the SEIR. The proposed Project would result in an increased number of trips than approved for the adopted TLSP. Due to the change in land use distribution onsite and the changes in current conditions and circumstances since the prior environmental review, cumulative impacts related to air quality, GHG emissions, noise, and traffic will be evaluated in the SEIR.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Change in Project Requiring EIR Revisions. The Project would change the land use distribution in the Project site and result in an increase in residential uses and population. Based on the analysis provided in this initial study, the following environmental impacts will be addressed in the SEIR: air quality, energy, GHG emissions, hydrology/water quality, land use, noise, population/housing, public services, traffic, and utilities.

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Appendix A Biological Record Search Results

August 4, 2023

Mr. Jeremy Krout
EPD Solutions, Inc.
3333 Michelson Dr., Suite 500
Irvine, CA 92612

Subject: Biological Records Search for the Tustin Legacy Specific Plan Amendment located in the city of Tustin, Orange County, California

Dear Mr. Krout:

Pursuant to your request, Hernandez Environmental Services (HES) conducted a desktop biological records search for the Tustin Legacy Specific Plan Amendment site, consisting of approximately 518 acres located in the city of Tustin within Orange County, California.

Methodology

HES conducted a literature review and reviewed aerial photographs and topographic maps of the Tustin Legacy Specific Plan Amendment site and the surrounding area. The *Tustin* 7.5' USGS topographic quadrangle and eight surrounding quadrangles were used to identify sensitive species in the California Natural Diversity Data Base (CNDDB). Additional resources reviewed during the literature search included the United States Fish and Wildlife (USFWS) Endangered Species Lists, and the California Native Plant Society's (CNPS) Rare plant lists to obtain species information for the project area.

Site Location

The 518-acre Tustin Legacy Specific Plan Amendment site is located within the city of Tustin, in Orange County, California. The site is located south of Armstrong Avenue, north of Jamboree Road, east of Barranca Parkway, and west of Edinger Avenue (Figure 1, *Location Map*). Specifically, the site is located within Section 26, Township 5 South, Range 9 West, within the *Tustin* United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 2, *Vicinity Map*). The project site is bound by Armstrong Avenue, Valencia Avenue, Edinger Avenue, Moffett Drive, Tustin Ranch Road, and Barranca Parkway. Surrounding developments include: commercial and industrial development to the northwest, west, south, and east; and residential developments to the north, east, and southeast.

Results

The Tustin Legacy Specific Plan Amendment site is relatively flat with elevations ranging from 40 feet to

68 feet above mean sea level. Soils historically mapped on the site by the Natural Resources Conservation Service (NRCS) include Chino silty clay loam and Chino silty clay loam, drained (Appendix A). According to the City of Tustin Environmental Final Environmental Impact Statement (FEIS)/Final Environmental Impact Report (FEIR) for the Disposal and Reuse of Marine Corp Air Station (MCAS) Tustin (1999), the site was previously mapped as cultivated fields and non-native grasslands. According to recent aerials of the site, the site is currently comprised of a mix of developed and vacant, disturbed land (Figure 3, *Aerial Map*).

Based upon aerial and topographic map reviews and a review of the USGS Wetland Mapping and USFWS National Wetlands Inventory Mapping, the Tustin Legacy Specific Plan Amendment site may contain streams, drainages, or wetlands (Figure 4, *Mapped Waters and Wetlands*); therefore, CDFW, United States Army Corps of Engineers (USACE), or Regional Water Quality Control Board (RWQCB) jurisdictional waters may occur within the project boundaries. Further, the FEIS/FEIR for the Disposal and Reuse of MCAS Tustin (1999) identified jurisdictional waters and wetlands within the boundaries of the site.

Due to the previous mapping and documentation of waters and wetlands on the Tustin Legacy Specific Plan Amendment site, it is recommended that a jurisdictional delineation of waters and wetlands be conducted for future development plans. Should future development plans propose impacts to jurisdictional waters and/or wetlands, the project would require mitigation through habitat creation, enhancement, or preservation as determined by consultation with the regulatory agencies during the permitting process. Any impacts to CDFW jurisdictional waters would require a 1600 Streambed Alteration Agreement from the CDFW. Any impacts to federal jurisdictional waters would require a Section 404 permit authorization from the USACE and a 401 State Water Quality Certification from the RWQCB. Any impacts to waters of the State would require a Waste Discharge Requirements from the RWQCB.

The Tustin Legacy Specific Plan Amendment site was evaluated for its function as a wildlife corridor that species would use to move between wildlife habitat zones. Typically, mountain canyons or riparian corridors are used by wildlife as corridors; the project site does not contain these features. The site consists of flat, disturbed land surrounded by urban development such as commercial and industrial uses, residential development, and roadways. No wildlife movement corridors were found to be present on the site.

No designated critical habitat occurs on or within the vicinity of the Tustin Legacy Specific Plan Amendment site. According to the CNDDB, a total of 46 plant species listed as state and/or federal Threatened, Endangered, or Candidate species or listed plants on the CNPS Rare Plan Inventory have a potential to occur on the site. In addition, the CNDDB identifies 14 sensitive habitats that have the potential to occur on the site. Further, a total of 22 wildlife species are listed as state and/or federal Endangered, Threatened and Candidate were identified by the CNDDB to have a potential to occur on the site. Sensitive wildlife species with the potential to occur within the vicinity of the site are listed in Appendix B. According to the CNDDB, western pond turtle (*Emys marmorata*), a CDFW species of special concern, has previously been documented on the eastern portion of the site. In addition, several CNPS

listed plants have been documented within the vicinity of the site.

According to the FEIS/FEIR for the Disposal and Reuse of MCAS Tustin (1999), the burrowing owl (*Athene cunicularia*) a CDFW Species of Special Concern, American peregrine falcon (*Falco peregrinus*) a delisted endangered species, loggerhead shrike (*Lanius ludovicianus*) a CDFW species of special concern, western pond turtle, San Diego fairy shrimp (*Branchinecta sandiegonensis*) a state and federally endangered species, and Riverside fairy shrimp (*Streptocephalus woottoni*) a state and federally endangered species were evaluated for their potential to occur on the Tustin Legacy Specific Plan Amendment site. It was determined that the western pond turtle and loggerhead shrike had the potential to occur on the site and mitigation measures were provided for the relocation of the western pond turtle and removal of loggerhead shrike nesting and foraging habitat.

Currently, no plans are available for the future development of the Tustin Legacy Specific Plan Amendment site. At the time when future development plans are available for the site, it is recommended that habitat assessments be conducted for state and/or federal Endangered, Threatened and Candidate or sensitive species with the potential to occur on the Tustin Legacy Specific Plan Amendment site.

Migratory non-game native bird species are protected under the federal Migratory Bird Treaty Act. Additionally, Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests. Although the Tustin Legacy Specific Plan Amendment site appears to be regularly disturbed, the site has been documented to contain ornamental trees and shrubs that can support nesting song birds during the nesting bird season of February 1 through September 15. Should future development plans propose that trees and shrubs be removed between February 1 and September 15, pre-construction nesting bird surveys will be required.

If you have any questions about this report, please feel free to contact me at (951) 334-6219 with any further questions.

Sincerely,

Shawn Gatchel-Hernandez
Principal Regulatory Specialist

FIGURES

Figure 1

Location Map

Tustin Legacy Specific Plan (TLSP)

City of Tustin

Orange County, California

Legend

Project Site (518 Acres)

Hernandez Environmental Services

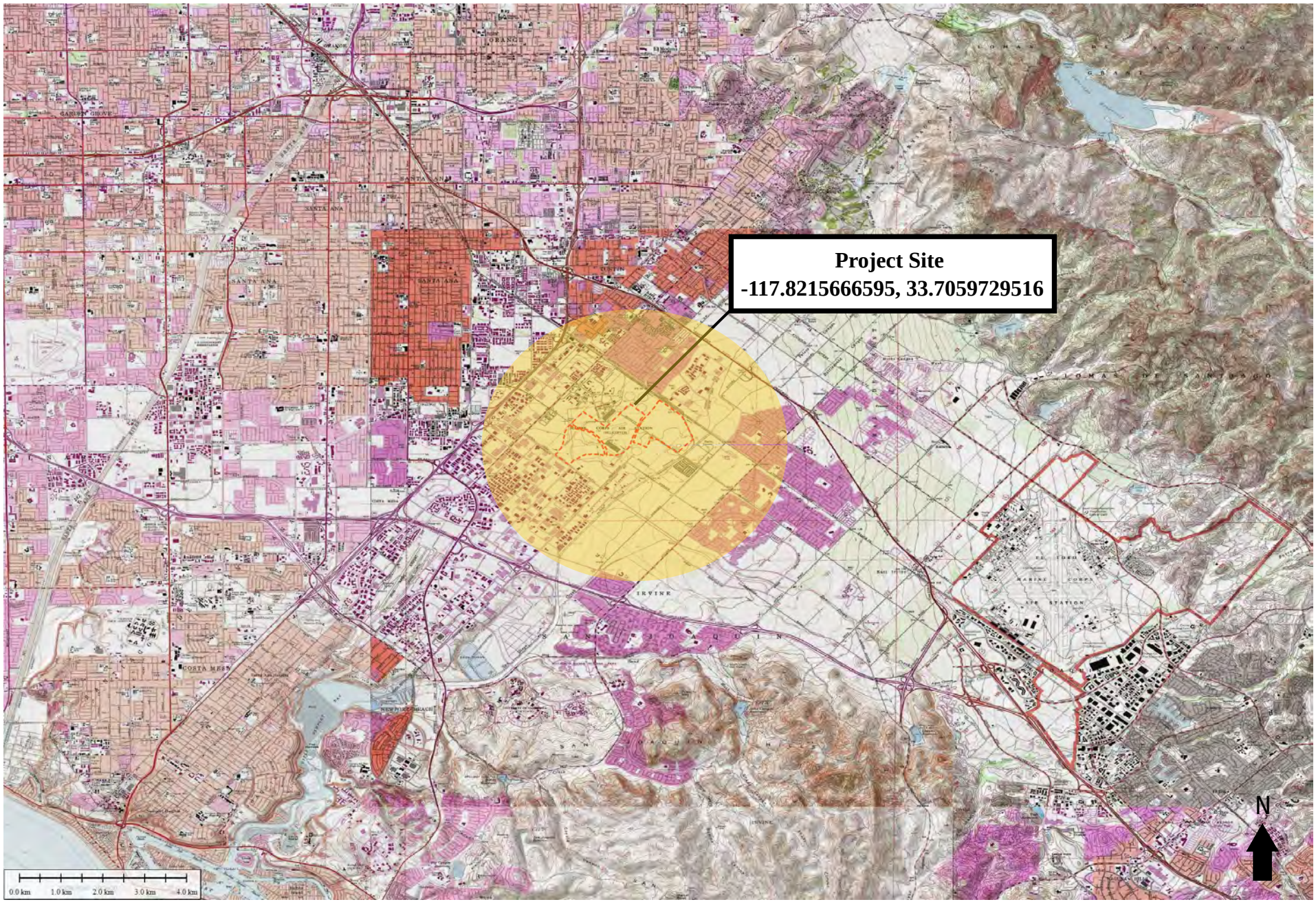

Figure 2

Vicinity Map

Tustin Legacy Specific Plan (TLSP)

City of Tustin

Orange County, California

Legend

Project Site (518 Acres)

Hernandez Environmental Services

Figure 3
Aerial Map
Tustin Legacy Specific Plan (TLSP)
City of Tustin
Orange County, California

Legend

Project Site (518 Acres)

Hernandez Environmental Services

Figure 4

Mapped Waters and Wetlands
Tustin Legacy Specific Plan (TLSP)
City of Tustin
Orange County, California

Legend

Project Site (518 Acres)
Potential Waters and Wetlands

Hernandez Environmental Services

APPENDIX A

Soil Map—Orange County and Part of Riverside County, California
(Site 1A soil map)

Map Scale: 1:15,100 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 200 400 800 1200

Feet
0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Orange County and Part of Riverside County, California
Survey Area Data: Version 17, Aug 30, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 17, 2023—Feb 8, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
139	Chino silty clay loam	0.8	0.1%
140	Chino silty clay loam, drained	516.9	99.9%
Totals for Area of Interest		**517.7**	**100.0%**

APPENDIX B

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Abronia villosa var. aurita	chaparral sand-verbena	Dicots	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Desert dunes	Chaparral, coastal scrub, desert dunes.	Sandy areas. -60-1570 m.
Allium marvinii	Yucaipa onion	Monocots	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral	Chaparral.	In openings on clay soils. 850-1070 m.
Aphanisma blitoides	aphanisma	Dicots	None	None	1B.2	SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | SB_SBBG-Santa Barbara Botanic Garden	Coastal bluff scrub | Coastal dunes | Coastal scrub	Coastal bluff scrub, coastal dunes, coastal scrub.	On bluffs and slopes near the ocean in sandy or clay soils. 3-305 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Astragalus brauntonii	Braunton's milk-vetch	Dicots	Endangered	None	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Chaparral | Coastal scrub | Limestone | Valley & foothill grassland	Chaparral, coastal scrub, valley and foothill grassland.	Recent burns or disturbed areas; usually on sandstone with carbonate layers. Soil specialist; requires shallow soils to defeat pocket gophers and open areas, preferably on hilltops, saddles or bowls between hills. 3-640 m.
Astragalus hornii var. hornii	Horn's milk-vetch	Dicots	None	None	1B.1	BLM_S-Sensitive	Alkali playa | Meadow & seep | Wetland	Meadows and seeps, playas.	Lake margins, alkaline sites. 75-350 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Atriplex coulteri	Coulter's saltbush	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Coastal bluff scrub | Coastal dunes | Coastal scrub | Valley & foothill grassland	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland.	Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 2-460 m.
Atriplex pacifica	south coast saltscale	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Alkali playa | Coastal bluff scrub | Coastal dunes | Coastal scrub	Coastal scrub, coastal bluff scrub, playas, coastal dunes.	Alkali soils. 1-400 m.
Atriplex parishii	Parish's brittlescale	Dicots	None	None	1B.1	SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Alkali playa | Chenopod scrub | Meadow & seep | Vernal pool | Wetland	Vernal pools, chenopod scrub, playas.	Usually on drying alkali flats with fine soils. 4-1420 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Atriplex serenana var. davidsonii	Davidson's saltscale	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub | Coastal scrub	Coastal bluff scrub, coastal scrub.	Alkaline soil. 0-480 m.
Baccharis malibuensis	Malibu baccharis	Dicots	None	None	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub | Riparian woodland	Coastal scrub, chaparral, cismontane woodland, riparian woodland.	In Conejo volcanic substrates, often on exposed roadcuts. Sometimes occupies oak woodland habitat. 150-320 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Brodiaea filifolia	thread-leaved brodiaea	Monocots	Threatened	Endangered	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Cismontane woodland | Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools.	Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m.
California Walnut Woodland	California Walnut Woodland	Woodland	None	None			Cismontane woodland		
Calochortus plummerae	Plummer's mariposa-lily	Monocots	None	None	4.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub | Lower montane coniferous forest | Valley & foothill grassland	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest.	Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Calochortus weedii var. intermedius	intermediate mariposa-lily	Monocots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Valley & foothill grassland	Coastal scrub, chaparral, valley and foothill grassland.	Dry, rocky calcareous slopes and rock outcrops. 60-1575 m.
Centromadia parryi ssp. australis	southern tarplant	Dicots	None	None	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | SB_SBBG-Santa Barbara Botanic Garden	Marsh & swamp | Salt marsh | Valley & foothill grassland | Vernal pool | Wetland	Marshes and swamps (margins), valley and foothill grassland, vernal pools.	Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. 0-975 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Chaenactis glabriuscula var. orcuttiana	Orcutt's pincushion	Dicots	None	None	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Coastal bluff scrub | Coastal dunes	Coastal bluff scrub, coastal dunes.	Sandy sites. 3-80 m.
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	Dicots	Endangered	Endangered	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | SB_SBBG-Santa Barbara Botanic Garden	Coastal dunes | Marsh & swamp | Salt marsh | Wetland	Marshes and swamps, coastal dunes.	Limited to the higher zones of salt marsh habitat. 0-10 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	Dicots	None	Endangered	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Coastal scrub | Valley & foothill grassland	Coastal scrub, valley and foothill grassland.	Sandy soils. 15-1015 m.
Chorizanthe polygonoides var. longispina	long-spined spineflower	Dicots	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Coastal scrub | Meadow & seep | Ultramafic | Valley & foothill grassland | Vernal pool	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools.	Gabbroic clay. 30-1630 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Comarostaphylis diversifolia ssp. diversifolia	summer holly	Dicots	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Cismontane woodland	Chaparral, cismontane woodland.	Often in mixed chaparral in California, sometimes post-burn. 30-855 m.
Dudleya multicaulis	many-stemmed dudleya	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Valley & foothill grassland	Chaparral, coastal scrub, valley and foothill grassland.	In heavy, often clayey soils or grassy slopes. 1-910 m.
Dudleya stolonifera	Laguna Beach dudleya	Dicots	Threatened	Threatened	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub | Valley & foothill grassland	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland.	In thin soil on north-facing sandstone cliffs. 5-185 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Dicots	Endangered	Endangered	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral | Coastal scrub	Coastal scrub, chaparral.	In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m.
Eryngium aristulatum var. parishii	San Diego button-celery	Dicots	Endangered	Endangered	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Vernal pools, coastal scrub, valley and foothill grassland.	San Diego mesa hardpan and claypan vernal pools and southern interior basalt flow vernal pools; usually surrounded by scrub. 15-880 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Euphorbia misera	cliff spurge	Dicots	None	None	2B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Coastal bluff scrub | Coastal scrub | Mojavean desert scrub	Coastal bluff scrub, coastal scrub, Mojavean desert scrub.	Rocky sites. 3-430 m.
Helianthus nuttallii ssp. parishii	Los Angeles sunflower	Dicots	None	None	1A		Freshwater marsh | Marsh & swamp | Salt marsh | Wetland	Marshes and swamps (coastal salt and freshwater).	35-1525 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Hesperocyparis forbesii	Tecate cypress	Gymnosperms	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | SB_UCSC-UC Santa Cruz | SB_USDA-US Dept of Agriculture | USFS_S-Sensitive	Chaparral | Closed-cone coniferous forest	Closed-cone coniferous forest, chaparral.	Primarily on north-facing slopes; groves often associated with chaparral. On clay or gabbro. 60-1650 m.
Horkelia cuneata var. puberula	mesa horkelia	Dicots	None	None	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub	Chaparral, cismontane woodland, coastal scrub.	Sandy or gravelly sites. 15-1645 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Isocoma menziesii var. decumbens	decumbent goldenbush	Dicots	None	None	1B.2	BLM_S-Sensitive | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Coastal scrub	Coastal scrub, chaparral.	Sandy soils; often in disturbed sites. 1-915 m.
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Dicots	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Alkali playa | Marsh & swamp | Salt marsh | Vernal pool | Wetland	Coastal salt marshes, playas, vernal pools.	Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Lepechinia cardiophylla	heart-leaved pitcher sage	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Chaparral | Cismontane woodland | Closed-cone coniferous forest	Closed-cone coniferous forest, chaparral, cismontane woodland.	115-1345 m.
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	Dicots	None	None	4.3		Chaparral | Coastal scrub	Chaparral, coastal scrub.	Dry soils, shrubland. 4-1435 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Monardella hypoleuca ssp. intermedia	intermediate monardella	Dicots	None	None	1B.3		Chaparral | Cismontane woodland | Lower montane coniferous forest	Chaparral, cismontane woodland, lower montane coniferous forest (sometimes).	Often in steep, brushy areas. 195-1675 m.
Nama stenocarpa	mud nama	Dicots	None	None	2B.2		Marsh & swamp | Wetland	Marshes and swamps.	Lake shores, river banks, intermittently wet areas. 15-815 m.
Nasturtium gambelii	Gambel's water cress	Dicots	Endangered	Threatened	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Brackish marsh | Freshwater marsh | Marsh & swamp | Wetland	Marshes and swamps.	Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-305 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Navarretia prostrata	prostrate vernal pool navarretia	Dicots	None	None	1B.2		Coastal scrub | Meadow & seep | Valley & foothill grassland | Vernal pool | Wetland	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps.	Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 3-1235 m.
Nemacaulis denudata var. denudata	coast woolly-heads	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Coastal dunes	Coastal dunes.	0-5 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Nolina cismontana	chaparral nolina	Monocots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Ultramafic	Chaparral, coastal scrub.	Primarily on sandstone and shale substrates; also known from gabbro. 140-1100 m.
Orcuttia californica	California Orcutt grass	Monocots	Endangered	Endangered	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Vernal pool | Wetland	Vernal pools.	10-660 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Penstemon californicus	California beardtongue	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_USDA-US Dept of Agriculture | USFS_S-Sensitive	Chaparral | Lower montane coniferous forest | Pinon & juniper woodlands	Chaparral, lower montane coniferous forest, pinyon and juniper woodland.	Stony slopes and shrubby openings; sandy or granitic soils. 240-2290 m.
Pentachaeta aurea ssp. allenii	Allen's pentachaeta	Dicots	None	None	1B.1		Coastal scrub | Valley & foothill grassland	Valley and foothill grasslands, coastal scrub.	Openings in scrub or grassland. 75-520 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Pseudognaphalium leucocephalum	white rabbit-tobacco	Dicots	None	None	2B.2		Chaparral | Cismontane woodland | Coastal scrub | Riparian woodland	Riparian woodland, cismontane woodland, coastal scrub, chaparral.	Sandy, gravelly sites. 35-515 m.
Quercus dumosa	Nuttall's scrub oak	Dicots	None	None	1B.1	BLM_S-Sensitive | IUCN_EN-Endangered | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Chaparral | Closed-cone coniferous forest | Coastal scrub	Closed-cone coniferous forest, chaparral, coastal scrub.	Generally on sandy soils near the coast; sometimes on clay loam. 15-640 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Riversidian Alluvial Fan Sage Scrub	Riversidian Alluvial Fan Sage Scrub	Scrub	None	None			Coastal scrub		
Senecio aphanactis	chaparral ragwort	Dicots	None	None	2B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Cismontane woodland | Coastal scrub	Chaparral, cismontane woodland, coastal scrub.	Drying alkaline flats. 20-1020 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Sidalcea neomexicana	salt spring checkerbloom	Dicots	None	None	2B.2	USFS_S-Sensitive	Alkali playa | Chaparral | Coastal scrub | Lower montane coniferous forest | Mojavean desert scrub | Wetland	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub.	Alkali springs and marshes. 3-2380 m.
Southern California Arroyo Chub/Santa Ana Sucker Stream	Southern California Arroyo Chub/Santa Ana Sucker Stream	Inland Waters	None	None					
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	Riparian	None	None			Riparian forest		
Southern Coastal Salt Marsh	Southern Coastal Salt Marsh	Marsh	None	None			Marsh & swamp | Wetland		
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest	Riparian	None	None			Riparian forest		
Southern Dune Scrub	Southern Dune Scrub	Dune	None	None			Coastal dunes		

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Southern Foredunes	Southern Foredunes	Dune	None	None			Coastal dunes		
Southern Interior Cypress Forest	Southern Interior Cypress Forest	Forest	None	None			Closed-cone coniferous forest		
Southern Riparian Scrub	Southern Riparian Scrub	Riparian	None	None			Riparian scrub		
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	Riparian	None	None			Riparian woodland		
Southern Willow Scrub	Southern Willow Scrub	Riparian	None	None			Riparian scrub		
Suaeda esteroa	estuary seablite	Dicots	None	None	1B.2		Marsh & swamp | Salt marsh | Wetland	Marshes and swamps.	Coastal salt marshes in clay, silt, and sand substrates. 0-80 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Symphyotrichum defoliatum	San Bernardino aster	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Cismontane woodland | Coastal scrub | Lower montane coniferous forest | Marsh & swamp | Meadow & seep | Valley & foothill grassland	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland.	Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.
Valley Needlegrass Grassland	Valley Needlegrass Grassland	Herbaceous	None	None			Valley & foothill grassland		
Verbesina dissita	big-leaved crownbeard	Dicots	Threatened	Threatened	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral | Coastal scrub	Chaparral, coastal scrub.	Steep, rocky, primarily north-facing slopes within 1.5 miles of the ocean, in gravelly soils. 150-245 m.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Accipiter cooperii	Cooper's hawk	Birds	None	None		CDFW_WL-Watch List | IUCN_LC-Least Concern	Cismontane woodland | Riparian forest | Riparian woodland | Upper montane coniferous forest	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.
Agelaius tricolor	tricolored blackbird	Birds	None	Threatened		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | USFWS_BCC-Birds of Conservation Concern	Freshwater marsh | Marsh & swamp | Swamp | Wetland	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	Birds	None	None		CDFW_WL-Watch List	Chaparral | Coastal scrub	Resident in Southern California coastal sage scrub and sparse mixed chaparral.	Frequents relatively steep, often rocky hillsides with grass and forb patches.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Ammodramus savannarum	grasshopper sparrow	Birds	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Valley & foothill grassland	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.
Anaxyrus californicus	arroyo toad	Amphibians	Endangered	None		CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered	Desert wash | Riparian scrub | Riparian woodland | South coast flowing waters | South coast standing waters	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc.	Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Anniella stebbinsi	Southern California legless lizard	Reptiles	None	None		CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Broadleaved upland forest | Chaparral | Coastal dunes | Coastal scrub	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County.	Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Antrozous pallidus	pallid bat	Mammals	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Chaparral | Coastal scrub | Desert wash | Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Riparian woodland | Sonoran desert scrub | Upper montane coniferous forest | Valley & foothill grassland	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
Ardea herodias	great blue heron	Birds	None	None		CDF_S-Sensitive | IUCN_LC-Least Concern	Brackish marsh | Estuary | Freshwater marsh | Marsh & swamp | Riparian forest | Wetland	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes.	Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Arizona elegans occidentalis	California glossy snake	Reptiles	None	None		CDFW_SSC-Species of Special Concern		Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California.	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.
Asio otus	long-eared owl	Birds	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Cismontane woodland | Great Basin scrub | Riparian forest | Riparian woodland | Upper montane coniferous forest	Riparian bottomlands grown to tall willows and cottonwoods ; also, belts of live oak paralleling stream courses.	Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Aspidoscelis hyperythra	orange-throated whiptail	Reptiles	None	None		CDFW_WL-Watch List | IUCN_LC-Least Concern | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats.	Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.
Aspidoscelis tigris stejnegeri	coastal whiptail	Reptiles	None	None		CDFW_SSC-Species of Special Concern		Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas.	Ground may be firm soil, sandy, or rocky.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Athene cunicularia	burrowing owl	Birds	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Coastal prairie | Coastal scrub | Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Sonoran desert scrub | Valley & foothill grassland	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.
Bombus crotchii	Crotch bumble bee	Insects	None	Candidate Endangered		IUCN_EN-Endangered		Coastal California east to the Sierra-Cascade crest and south into Mexico.	Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.

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Bombus pensylvanicus	American bumble bee	Insects	None	None		IUCN_VU-Vulnerable	Coastal prairie | Great Basin grassland | Valley & foothill grassland		Long-tongued; forages on a wide variety of flowers including vetches (Vicia), clovers (Trifolium), thistles (Cirsium), sunflowers (Helianthus), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.

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Branchinecta sandiegonensis	San Diego fairy shrimp	Crustaceans	Endangered	None		IUCN_EN-Endangered	Chaparral | Coastal scrub | Vernal pool | Wetland	Endemic to San Diego and Orange County mesas.	Vernal pools.
Buteo regalis	ferruginous hawk	Birds	None	None		CDFW_WL-Watch List | IUCN_LC-Least Concern	Great Basin grassland | Great Basin scrub | Pinon & juniper woodlands | Valley & foothill grassland	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.

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Buteo swainsoni	Swainson's hawk	Birds	None	Threatened		BLM_S-Sensitive | IUCN_LC-Least Concern	Great Basin grassland | Riparian forest | Riparian woodland | Valley & foothill grassland	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	Birds	None	None		CDFW_SSC-Species of Special Concern | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Coastal scrub	Southern California coastal sage scrub.	Wrens require tall opuntia cactus for nesting and roosting.

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Catostomus santaanae	Santa Ana sucker	Fish	Threatened	None		AFS_TH-Threatened | IUCN_EN-Endangered	Aquatic | South coast flowing waters	Endemic to Los Angeles Basin south coastal streams.	Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	Mammals	None	None			Chaparral | Coastal scrub	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego, Riverside, San Bernardino, and Los Angeles Counties, inclusive of Orange County.	Sandy, herbaceous areas, usually in association with rocks or coarse gravel.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Charadrius nivosus nivosus	western snowy plover	Birds	Threatened	None		CDFW_SSC-Species of Special Concern	Great Basin standing waters | Sand shore | Wetland	Sandy beaches, salt pond levees and shores of large alkali lakes.	Needs sandy, gravelly or friable soils for nesting.
Choeronycteris mexicana	Mexican long-tongued bat	Mammals	None	None		CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	Pinon & juniper woodlands | Riparian scrub | Sonoran thorn woodland	Occasionally found in San Diego County, which is on the periphery of their range.	Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves, and in and around buildings.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Cicindela hirticollis gravida	sandy beach tiger beetle	Insects	None	None			Coastal dunes	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico.	Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.
Cicindela latesignata	western beach tiger beetle	Insects	None	None			Estuary | Mud shore/flats | Salt marsh | Sand shore	Mudflats and beaches of coastal estuaries from San Diego County to Los Angeles County.	Typically inhabit wet or dry sandy beaches and mud, sand, or salt flats.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Birds	Threatened	Endangered		BLM_S-Sensitive | USFS_S-Sensitive	Riparian forest	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.
Coelus globosus	globose dune beetle	Insects	None	None		IUCN_VU-Vulnerable	Coastal dunes	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico.	Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.

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Coturnicops noveboracensis	yellow rail	Birds	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Freshwater marsh | Meadow & seep	Summer resident in eastern Sierra Nevada in Mono County.	Freshwater marshlands.
Crotalus ruber	red-diamond rattlesnake	Reptiles	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Chaparral | Mojavean desert scrub | Sonoran desert scrub	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains.	Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.

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Danaus plexippus plexippus pop. 1	monarch - California overwintering population	Insects	Candidate	None		IUCN_EN-Endangered | USFS_S-Sensitive	Closed-cone coniferous forest	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.
Elanus leucurus	white-tailed kite	Birds	None	None		BLM_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern	Cismontane woodland | Marsh & swamp | Riparian woodland | Valley & foothill grassland | Wetland	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Emys marmorata	western pond turtle	Reptiles	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	Aquatic | Artificial flowing waters | Klamath/North coast flowing waters | Klamath/North coast standing waters | Marsh & swamp | Sacramento/San Joaquin flowing waters | Sacramento/San Joaquin standing waters | South coast flowing waters | South coast stan	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Eremophila alpestris actia	California horned lark	Birds	None	None		CDFW_WL-Watch List | IUCN_LC-Least Concern	Marine intertidal & splash zone communities | Meadow & seep	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills.	Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.
Eucyclogobius newberryi	tidewater goby	Fish	Endangered	None		AFS_EN-Endangered | IUCN_NT-Near Threatened	Aquatic | Klamath/North coast flowing waters | Sacramento/San Joaquin flowing waters | South coast flowing waters	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River.	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Eumops perotis californicus	western mastiff bat	Mammals	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern	Chaparral | Cismontane woodland | Coastal scrub | Valley & foothill grassland	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.	Roosts in crevices in cliff faces, high buildings, trees and tunnels.
Euphydryas editha quino	quino checkerspot butterfly	Insects	Endangered	None			Chaparral | Coastal scrub	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties.	Hills and mesas near the coast. Need high densities of food plants Plantago erecta, P. insularis, and Orthocarpus purpurescens.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Falco peregrinus anatum	American peregrine falcon	Birds	Delisted	Delisted		CDF_S-Sensitive		Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Nest consists of a scrape or a depression or ledge in an open site.
Gila orcuttii	arroyo chub	Fish	None	None		AFS_VU-Vulnerable | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	Aquatic | South coast flowing waters	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins.	Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Glyptostoma gabrielense	San Gabriel chestnut	Mollusks	None	None				Terrestrial.	
Habroscelimorpha gabbii	western tidal-flat tiger beetle	Insects	None	None			Estuary | Mud shore/flats	Inhabits estuaries and mudflats along the coast of Southern California.	Generally found on dark-colored mud in the lower zone; occasionally found on dry saline flats of estuaries.
Haliaeetus leucocephalus	bald eagle	Birds	Delisted	Endangered		BLM_S-Sensitive | CDF_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern | USFS_S-Sensitive	Lower montane coniferous forest | Oldgrowth	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water.	Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Icteria virens	yellow-breasted chat	Birds	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Riparian forest | Riparian scrub | Riparian woodland	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses.	Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.
Lasiurus cinereus	hoary bat	Mammals	None	None		IUCN_LC-Least Concern	Broadleaved upland forest | Cismontane woodland | Lower montane coniferous forest | North coast coniferous forest	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding.	Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Laterallus jamaicensis coturniculus	California black rail	Birds	None	Threatened		BLM_S-Sensitive | CDFW_FP-Fully Protected | IUCN_EN-Endangered	Brackish marsh | Freshwater marsh | Marsh & swamp | Salt marsh | Wetland	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays.	Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.
Myotis yumanensis	Yuma myotis	Mammals	None	None		BLM_S-Sensitive | IUCN_LC-Least Concern	Lower montane coniferous forest | Riparian forest | Riparian woodland | Upper montane coniferous forest	Optimal habitats are open forests and woodlands with sources of water over which to feed.	Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Neotoma lepida intermedia	San Diego desert woodrat	Mammals	None	None		CDFW_SSC-Species of Special Concern	Coastal scrub	Coastal scrub of Southern California from San Diego County to San Luis Obispo County.	Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.
Nyctinomops macrotis	big free-tailed bat	Mammals	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern		Low-lying arid areas in Southern California.	Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	Fish	Endangered	Candidate Endangered		AFS_EN-Endangered	Aquatic | South coast flowing waters	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County).	Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.
Onychomys torridus ramona	southern grasshopper mouse	Mammals	None	None		CDFW_SSC-Species of Special Concern	Chenopod scrub	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Pandion haliaetus	osprey	Birds	None	None		CDF_S-Sensitive | CDFW_WL-Watch List | IUCN_LC-Least Concern	Riparian forest	Ocean shore, bays, freshwater lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.
Panoquina errans	wandering (=saltmarsh) skipper	Insects	None	None		IUCN_NT-Near Threatened	Marsh & swamp | Wetland	Southern California coastal salt marshes.	Requires moist saltgrass for larval development.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	Birds	None	Endangered		USFWS_BCC-Birds of Conservation Concern	Marsh & swamp | Wetland	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County.	Nests in Salicornia on and about margins of tidal flats.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Perognathus longimembris pacificus	Pacific pocket mouse	Mammals	Endangered	None		CDFW_SSC-Species of Special Concern	Coastal scrub	Inhabits the narrow coastal plains from the Mexican border north to El Segundo, Los Angeles County.	Seems to prefer soils of fine alluvial sands near the ocean, but much remains to be learned.
Phrynosoma blainvillii	coast horned lizard	Reptiles	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Chaparral | Cismontane woodland | Coastal bluff scrub | Coastal scrub | Desert wash | Pinon & juniper woodlands | Riparian scrub | Riparian woodland | Valley & foothill grassland	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Polioptila californica californica	coastal California gnatcatcher	Birds	Threatened	None		CDFW_SSC-Species of Special Concern	Coastal bluff scrub | Coastal scrub	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California.	Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.
Rallus obsoletus levipes	light-footed Ridgway's rail	Birds	Endangered	Endangered		CDFW_FP-Fully Protected	Marsh & swamp | Salt marsh | Wetland	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation.	Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on molluscs and crustaceans.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Rhinichthys osculus ssp. 8	Santa Ana speckled dace	Fish	None	None		AFS_TH-Threatened | CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Aquatic | South coast flowing waters	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system.	Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.
Riparia riparia	bank swallow	Birds	None	Threatened		BLM_S-Sensitive | IUCN_LC-Least Concern	Riparian scrub | Riparian woodland	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert.	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Salvadora hexalepis virgultea	coast patch-nosed snake	Reptiles	None	None		CDFW_SSC-Species of Special Concern	Coastal scrub	Brushy or shrubby vegetation in coastal Southern California.	Require small mammal burrows for refuge and overwintering sites.
Setophaga petechia	yellow warbler	Birds	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Riparian forest | Riparian scrub | Riparian woodland	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada.	Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Sorex ornatus salicornicus	southern California saltmarsh shrew	Mammals	None	None		CDFW_SSC-Species of Special Concern	Salt marsh	Coastal marshes in Los Angeles, Orange and Ventura counties.	Requires dense vegetation and woody debris for cover.
Spea hammondii	western spadefoot	Amphibians	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	Cismontane woodland | Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	Vernal pools are essential for breeding and egg-laying.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Sternula antillarum browni	California least tern	Birds	Endangered	Endangered		CDFW_FP-Fully Protected	Alkali playa | Wetland	Nests along the coast from San Francisco Bay south to northern Baja California.	Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas.
Streptocephalus woottoni	Riverside fairy shrimp	Crustaceans	Endangered	None		IUCN_EN-Endangered	Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub.	Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Taricha torosa	Coast Range newt	Amphibians	None	None		CDFW_SSC-Species of Special Concern		Coastal drainages from Mendocino County to San Diego County.	Lives in terrestrial habitats and will migrate over 1 km to breed in ponds, reservoirs and slow moving streams.
Taxidea taxus	American badger	Mammals	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Alkali marsh | Alkali playa | Alpine | Alpine dwarf scrub | Bog & fen | Brackish marsh | Broadleaved upland forest | Chaparral | Chenopod scrub | Cismontane woodland | Closed-cone coniferous forest | Coastal bluff scrub | Coastal dunes | Coastal prairie |	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Thamnophis hammondii	two-striped gartersnake	Reptiles	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Marsh & swamp | Riparian scrub | Riparian woodland | Wetland	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation.	Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.
Tryonia imitator	mimic tryonia (=California brackishwater snail)	Mollusks	None	None		IUCN_DD-Data Deficient	Aquatic | Brackish marsh | Estuary | Lagoon | Marsh & swamp | Salt marsh | Wetland	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County.	Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat
Vireo bellii pusillus	least Bell's vireo	Birds	Endangered	Endangered			Riparian forest | Riparian scrub | Riparian woodland	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft.	Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.

Appendix B Cultural Record Search Results

ATTACHMENT A

Archaeological Records Search Results

BFSA Environmental Services, a Perennial Company

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEMS

RECORDS SEARCH

Company:	BFSA Environmental Services, a Perennial Company
Processed By:	Emily T. Soong
Date Processed:	August 24, 2023
Project Identification:	Tustin Legacy Specific Plan Amendment
Information Center:	South Central Coastal Information Center
Search Radius:	500 Feet Buffer

Historical Resources:

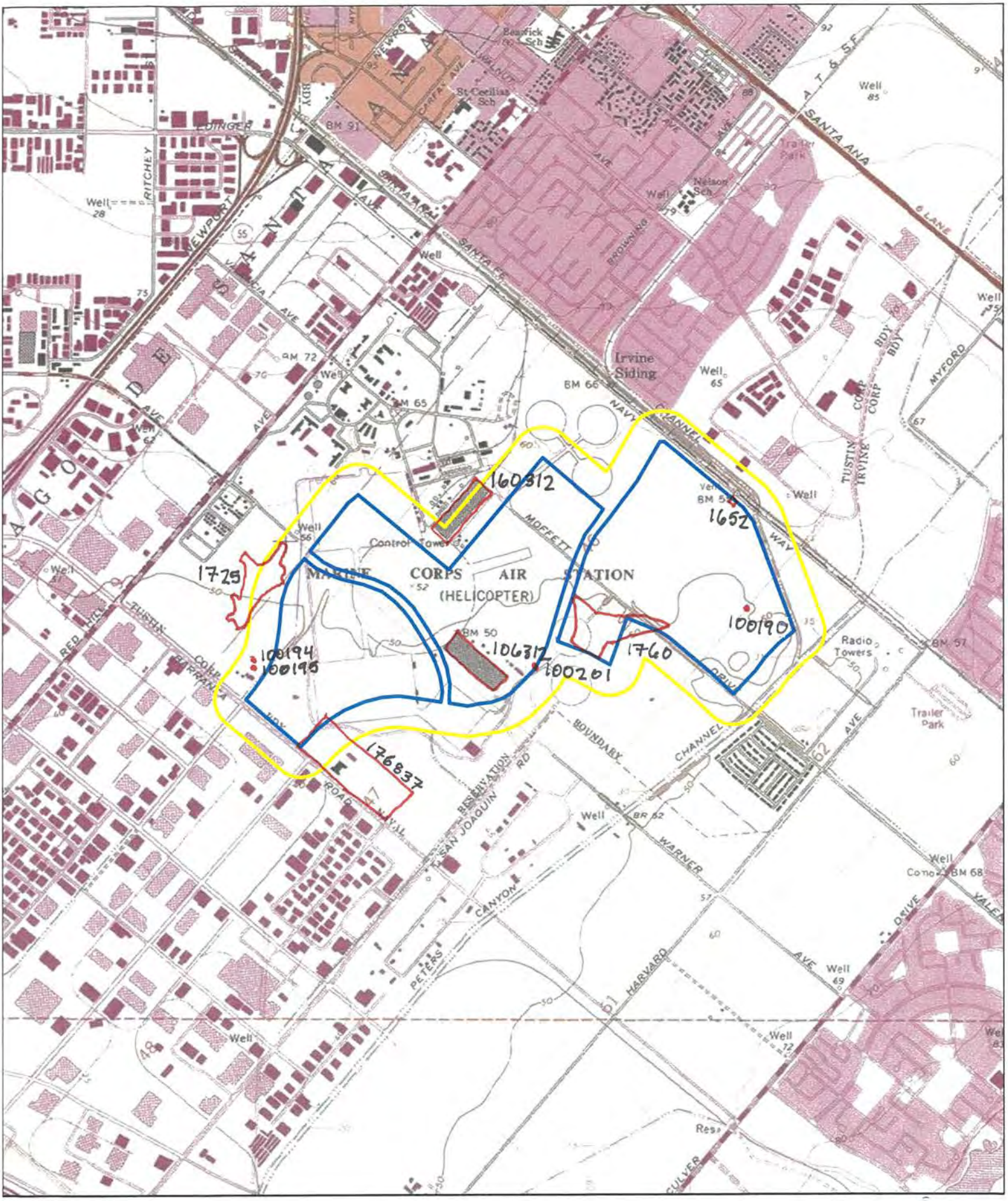
Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been reviewed for all recorded sites.

There are nine resources located within a 500 feet radius of the current project area, five of which are located within the subject property (30-1652, 30-1760, 30-10019, 30-100201, 30-160312).

Previous Survey Report Boundaries:

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been reviewed.

There are 24 reports within a 500 feet radius of the current project area, 15 of which are located within the subject property (OR-438, OR-1053, OR-1099, OR-1357, OR-3240, OR-3241, OR-3486, OR-3500, OR-3501, OR-4000, OR-4136, OR-4137, R-4220, OR-4265, OR-4530).



Tustin Legacy Specific Plan Amendment Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

Resources
1:24,000
1 of 1

ETS BFSAES: 8/18/2023

Resource List

Tustin Legacy

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-30-001652	CA-ORA-001652	Resource Name - Centex-1	Site	Prehistoric	AP02; AP15	2006 (C. Demcak, ARMC)	OR-03500, OR-03501, OR-04000, OR-04385
P-30-001725	CA-ORA-001725	Resource Name - TL-01	Site	Prehistoric	AP02; AP10	2013 (Geraldine Aron, Paleo Solutions Inc)	OR-04265
P-30-001760		Resource Name - TL-Lot19-01/H	Site	Prehistoric, Historic	AH04; AP02	2015 (David Schroeder, Paleo Solutions, Inc)	
P-30-100190		Resource Name - TL Isol-01; Other - LM09	Other	Prehistoric	AP02	2013 (Scott Armstrong, Paleo Solutions, Inc)	OR-04265
P-30-100194		Resource Name - TL Isol-07; Other - Field Number 091907A	Other	Prehistoric	AP02	2013 (Scott Armstrong, Paleo Solutions Inc)	OR-04265
P-30-100195		Resource Name - TL Isol-08; Other - Field Number 091907B	Other	Prehistoric	AP02	2013 (Scott Armstrong, Paleo Solutions, Inc)	OR-04265
P-30-100201		Resource Name - TL Isol-15; Other - 091511-01	Other	Prehistoric	AP02	2011 (Maria Espinoza, Paleo Solutions, Inc)	OR-04265
P-30-160312		OHP Property Number - 039681; Resource Name - Lighter-than-Air Hangars; Other - Marine Corps Air Station (Helicopter)	Structure	Historic	HP14; HP34	1974 (Colonel R.A. Kuci, Marine Corps Air Station)	OR-03241
P-30-176837		OHP Property Number - 170111; Resource Name - Tustin USAR Center; Other - Facility ID #CA071; Other - zip 92606	Building	Historic	HP34	2006	LA-08898, OR-03486

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 30-001652
HRI#
Trinomial CA-ORA-1652
NRHP Status Code

Other Listings
Review Code Reviewer Date

Page (1) of (4) *Resource Name or #: (assigned by recorder) Centex-1
P1. **Other Identifier**:
*P2. **Location**: (X) **Not for Publication** ( ) **Unrestricted** *a. **County** Orange
and (p2b and p2c or p2d. Attach a location Map as necessary.)
*b. **USGS 7.5' Quad** Tustin **Date** 1978; PR 1981 **T** 5S ; **R** 9W ; NE ¼ of SE ¼ of Sec. 46 S.B. **B.M.**
c. **Address** **City** **Zip**
d. **UTM**: (Give more than one for large and/or linear resources) Zone 11: 424924 mE / 3730315 mN
e. Other Locational Data: (e.g. parcel #, directions to resource, elevation, etc.) Located adjacent to E. Edinger Rd. inside fenceline of former MCAS; 0.4 miles NW of Jamboree Rd.

*P3a. Description (Describe resource and its major elements. Include design, materials, condition, size, setting, etc.)

Small lithic scatter with minor amounts of shell and faunal bone (30 x 30 m); located in open field, recently disced; minor disturbance (dirt road, gopher burrows).

*P3b. **Resource Attributes**: (List Attributes and codes) Lithic Scatter (AP2)
*P4. **Resources Present**: ( ) Building ( ) Structure ( ) Object (x) Site ( ) District ( ) Element of District ( ) Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo (View, Date, accession #)

*P6. **Date Constructed / Age and Sources**: ( ) Historic (x) Prehistoric ( ) Both

*P7. **Owner and Address:**
Tustin Legacy Community Partners, c/o Centex Homes
27101 Puerta Real, Mission Viejo, CA 92691

*P8. **Recorded by**: (Name, affiliation and address)
Carol Demcak, ARMC
3756 Hightide Drive
Rancho Palos Verdes, CA 90275

*P9. **Date Recorded**:6/21/06

*P10: **Survey Type**: (Describe)
Reconnaissance

*P11. **Report Citation**: (Cite survey report and other sources, or enter "none.")Demcak, C.R., 2006, Report of Test Level Investigations at Centex-1(CA-ORA-1652) City of Tustin, Orange County, California.

***Attachments**: ( ) NONE (x)Location Map (x)Sketch Map ( )Continuation Sheet ( )Building, Structure, and Object Record (x)Archaeological Record ( )District Record ( )Linear Feature Record ( )Milling Station Record ( )Rock Art Record ( ) Artifact Record ( ) Photograph Record ( ) Other (list)

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHAEOLOGICAL SITE RECORD

Primary # 30-001652
Trinomial CA-ORA-1652

 ***Resource Name or #** (Assigned by Recorder) Centex-1

*A1. **Dimensions**: a. Length 30 m ( ) x b. Width 30 m ( )
Method of Measurement: (x) Paced ( ) Taped ( ) Visual Estimate (x) Other: GPS
Method of Determination (Check any that apply.): (x) Artifacts ( ) Features ( ) Soil ( ) Vegetation ( ) Topography
( ) Cut Bank ( ) Animal Burrow ( ) Excavation ( ) Property Boundary ( ) Other (Explain):

Reliability of Determination: (x) High ( ) Medium ( ) Low ( ) Explain:

Limitations (Check any that apply): ( ) Restricted Areas ( ) Paved/built over ( ) Site limits incompletely defined
( ) Disturbances ( ) Vegetation (x) Other (Explain): Dirt road, gopher burrows

A2. Depth: ( ) None (x) Unknown Method of Determination:
*A3. **Human Remains**: (x) Present (x) Absent ( ) Possible ( ) Unknown (Explain)
Partial phalange (subadult) found on surface during test phase; turned over to O.C. Coroner's Office 8/11/06.

*A4. **Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location on sketch map):

None

*A5. **Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.):

12 flakes, 2 flake tools, 1 core tool, 1 possible hammerstone; 3 frags. shell (Chione, Donax); 2 pieces faunal bone (burnt frag.; phalange of med. to large mammal).

*A6. **Were Specimens Collected?** (x) No ( ) Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)
*A7. **Site Condition**: (x) Good ( ) Fair ( ) Poor (Describe disturbances.): Dirt road adjacent.

*A8. **Nearest Water** (Type, distance, and direction.): Intermittent drainage, Peters Canyon Wash 0.5 mi. to SE
*A9. **Elevation**: 55' contour
A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, Exposure, etc.): Open setting; minor topographic relief in vicinity; only grassland community present; soil dark grey-brown sandy silty alluvium with high clay content; some cobbles, gravels, and sands present.

A11. Historical Information:

*A12. **Age**: (x) Prehistoric ( ) Protohistoric ( ) 1542-1769 ( ) 1769-1848 ( ) 1848-1880 ( ) 1914-1945 ( ) Post 1945
( ) Undetermined Describe position in regional prehistoric chronology or factual historic dates if known:

May be Early Millingstone site due to absence of late indicators; too little data to make determination.

A13. Interpretations (Discuss data potential, functions, ethnic affiliation, and other interpretations):

Small base camp (habitation) based on assemblage (lithics, shell, and bone)

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record.):

Original Media/Negatives Kept at:
*A17. **Form Prepared by**: Carol R. Demcak **Date**:6/21/06
Affiliation and Address: ARMC, 3756 Hightide Drive, Rancho Palos Verdes, CA 90275

DPR 523C (1/95) ***Required Information**

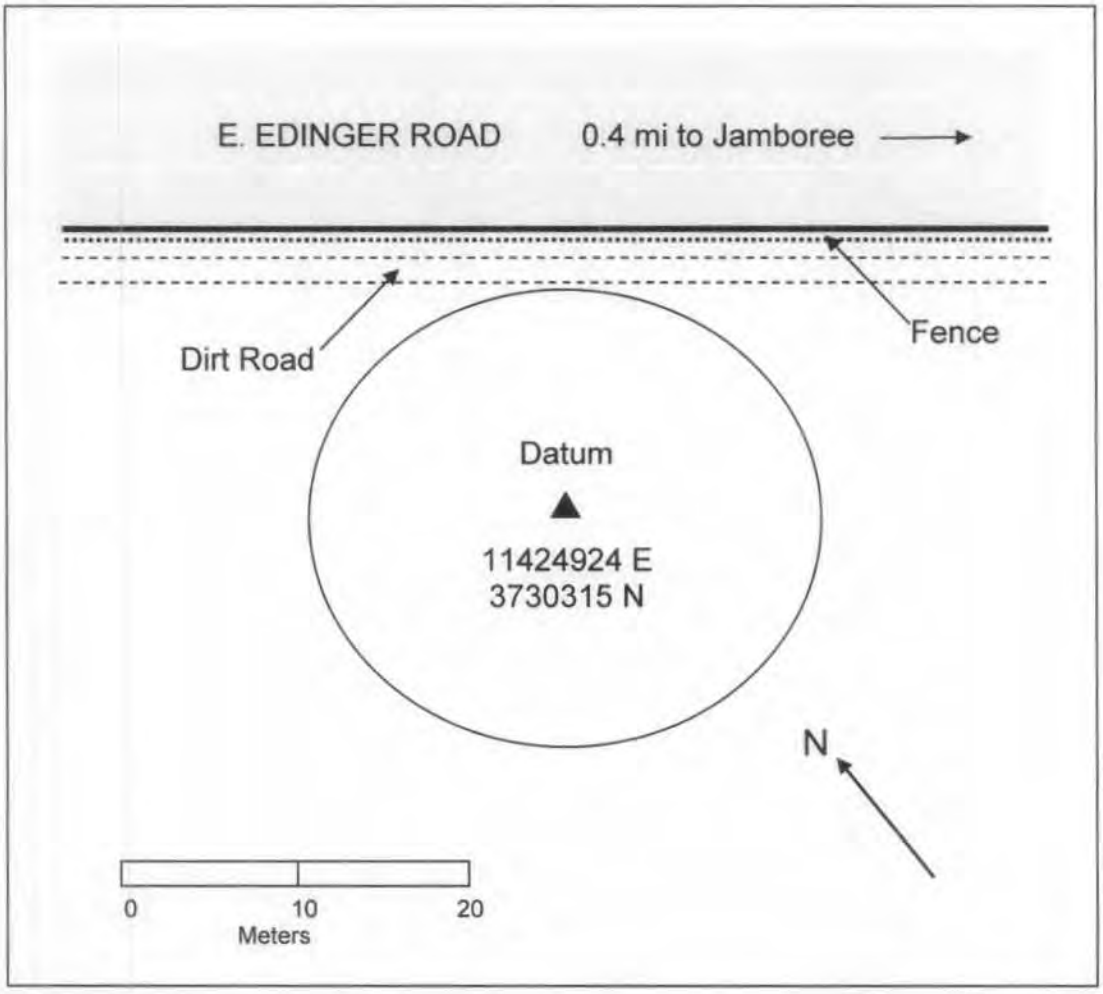
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary # 30-001652
HRI#
TRINOMIAL **CA-ORA-1652**

***Resource Name or #** (Assigned by Recorder) Centex-1

Drawn By: Jack Demcak, ARMC

***Date: 6/22/2006**



NOTE: Include scale bar and north arrow.

DPR 523K (1/95)

***Required Information**

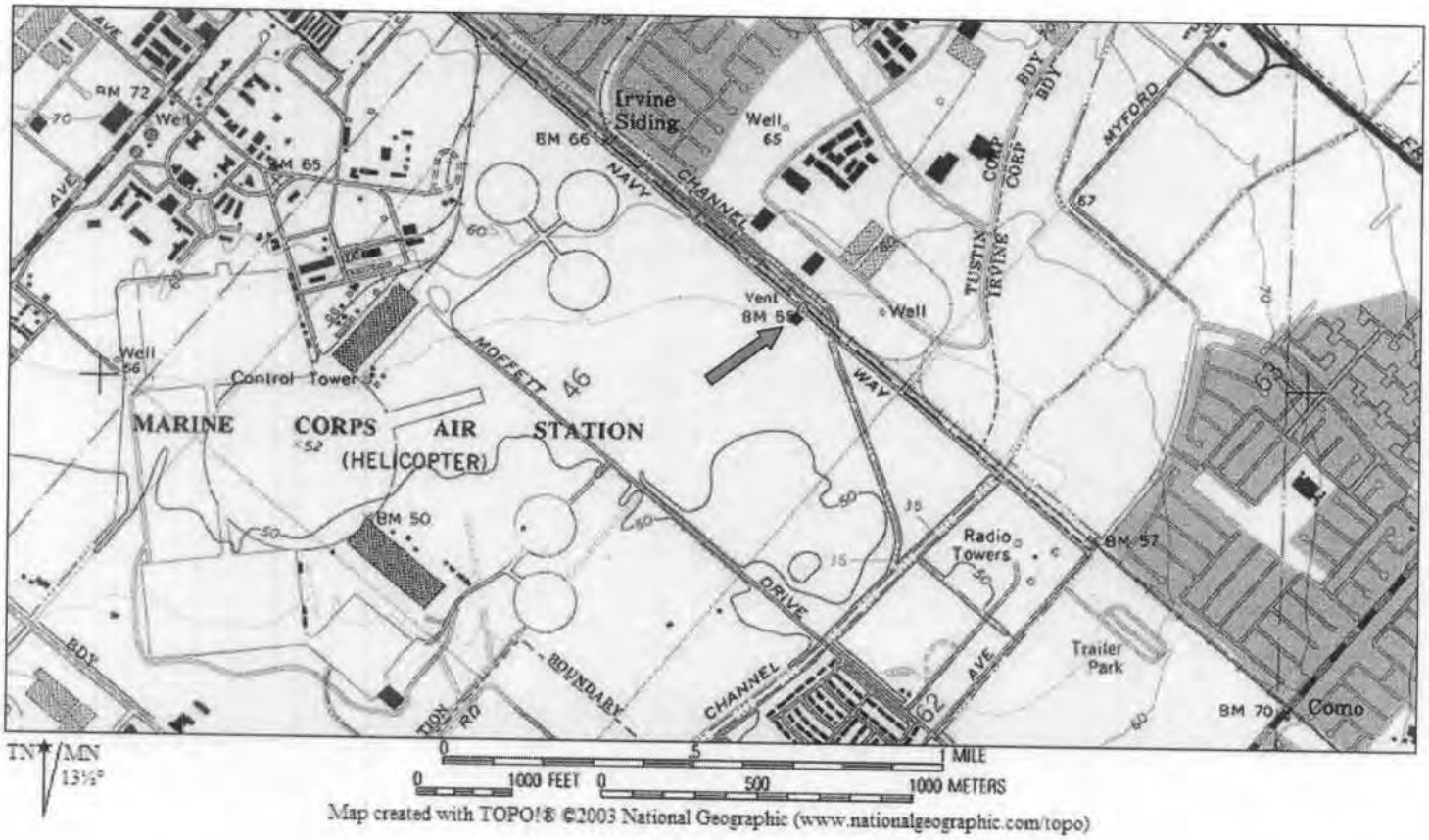
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # 30-001652
HRI#
TRINOMIAL CA-ORA-1652

Page (4) of (4)

***Resource Name or #** (Assigned by Recorder) Centex-1

Map Name: Tustin ***Scale** 1:24000 ***Date:** 1978; PR 1981



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

DPR 523J (1/95)

***Required Information**

CA-ORA-1652 (Centex-1) Test: Catalog

Item #	Surf. #	STP#	Unit	Level	Class	Type	Material	Faces	Frag.	Remarks
1	1				Gr. Stone	Mano	Granite	Bifacial		Battered;pecked; 6.0 x 5.2 x 4.5 cm
2	2				Fauna	C.undatella	Shell		yes	Chione frag.; unworked
3	3				Fauna	D. gouldii	Shell		yes	Donax frag; unworked
4	4				Ch. Stone	Flake	Quartzite			Tertiary
5	5				Ch. Stone	Flake	Quartzite			Tertiary
6	6				Fauna	Mammal	Bone		yes	Burnt; unworked
7	7				Fauna	Mammal	Bone		yes	Partial phalange; H. sapiens; subadult
8	8				Ch. Stone	Uniface	Metavolcanic			Util./ret.; 6.2x3.7x1.3 cm; nibbling wear
9	9				Ch. Stone	Flake	Quartzite			Secondary; 1-2" size
10	10				Ch. Stone	Flake	Quartzite			Secondary
11	11				Ch. Stone	Flake	Metavolcanic			Secondary; 1-2" size
12	12				Ch. Stone	Uniface	Quartzite			Util./ret.; 2.4x 1.3 x 0.4 cm
13	14				Ch. Stone	Reamer/pry	Metavolcanic		yes	Blunt tip; 8.3 x 3.7 x 2.0 cm
14	15				Ch. Stone	Flake	Andesite			Tertiary
15	16				Ch. Stone	Flake	Metavolcanic			Tertiary
16	17				Gr. Stone	Gr. St. frag.	Granite	Unifacial	yes	4.4 x 3.8 x 1.6 cm
17	17				Ch. Stone	Core	Argillite			Half reduced; cortex present
18	18				Ch. Stone	Chopper	Metavolcanic			6.1 x 3.7 x 1.6 cm; crushing wear
19			1	10 cm	Ch. Stone	Flake	Quartzite			n=4; 3 tertiary; 1 secondary
20			1	10 cm	Ch. Stone	Flake	Argillite			Secondary
21			1	10 cm	Ch. Stone	Flake	Basalt			Tertiary
23			1	10 cm	Fauna	C.californiensis	Shell		yes	Unworked
24			1	10 cm	Fauna	A. aequisulcatus	Shell		yes	Argopecten frag.; unworked
25			1	20 cm	Ch. Stone	Flake	Quartzite			n=4; all tertiary
26			1	20 cm	Ch. Stone	Flake	Metavolcanic			n=3; all tertiary
27			1	20 cm	Fauna	A. aequisulcatus	Shell		yes	Argopecten frag.; unworked
28			1	30 cm	Ch. Stone	Flake	Basalt			Tertiary
29			1	40 cm	Ch. Stone	Flake	Metavolcanic			Tertiary; 1-2" size
30			2	10 cm	Ch. Stone	Flake	Metavolcanic			n=2; both tertiary
31			2	20 cm	Fauna	O. biplicata	Shell		yes	Olivella frag.; unworked
32			2	20 cm	Fauna	A. aequisulcatus	Shell		yes	Argopecten frag.; unworked
33			2	30 cm	Ch. Stone	Flake	Basalt			Tertiary
34			2	30 cm	Fauna	D.californica	Shell		yes	Donax frag.; unworked
35		2		48 cm	Ch. Stone	Flake	Basalt			Tertiary
36		3		42 cm	Fauna	C.californiensis	Shell			Chione frag.; unworked
37		3		42 cm	Fauna	O. biplicata	Shell			Burnt; Olivella frag.; unworked
38		3		42 cm	Ch. Stone	Flake	Basalt			Tertiary
39		4		32 cm	Ch. Stone	Flake	Quartzite			n=2; both tertiary
40		4		32 cm	Ch. Stone	Flake	Argillite			Tertiary
41		4		32 cm	Ch. Stone	Flake	Metavolcanic			n=2; both tertiary

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial CA-ORA-1725
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

Page 1 of 21 *Resource Name or #: TL-01

P1. Other Identifier:
*P2. Location: ■ Not for Publication ☐ Unrestricted *a. County: Orange
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quad: Tustin Date: 1983 T 5S ; R 9W ; ¼ of ¼ of Sec 47 ; S.B. B.M.
c. Address: Irvine Center Dr. City: Tustin Zip: 92606
d. UTM: Zone: 11 ; mE/ mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 48 to 52 ft AMSL
This site is located on the former Tustin Marine Base in Tustin, Orange County, Ca. The seting is the Tustin Plain. The area is bounded by Irvine Center Dr in the north, Warner Ave in the south, and Redhill Ave in the west.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This site consists of 4 loci labeled A through D all located in an area of 487 meters north to south by 183 meters east to west. Locus A contained a cache feature with a sandstone slab surrounded by 4 metate and and 6 handstones in close promixity (1 to 30 cm). Including this feature, locus A contained 410 fragments of groundstone representing approximately 48 tools (handstones n=24, netherstones n=22, slab n=1,and one ground steatite tube). In addition locus A contained 4 chipped stone artifacts (cores n=2, flake n=1, and scrapers n=1) and 4 marine shells. Locus B was approximately 120 yards to the northnortheast of locus A and consisted of another groundstone scatter containing 7 metates and 17 handstones. Locus B also contained 6 chipped stone artifcats (tested cobbles n=2, scrapers n=2, flake n=1, and shatter n=1) and 8 marine shells. Locus C consisted of a loose scatter of 3 groundstone artifacts (metates n=2 and manos n=1). Locus C also contained 2 marine shells. Locus C was located about 50 meters south of locus B. Locus D consisted of a tight cluster of 4 metates and 1 mano. This locus was located about 110 meters west of locus B. All loci of the site were stratigraphically in the same layer about 2 to 3 feet below natural surface.

*P3b. Resource Attributes: (List attributes and codes) AP2, AP10
*P4. Resources Present: ☐Building ☐Structure ☐Object ■Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) 9/21/2008 3:02 PM. View to southwest. Photo # 4652. Cooper Center accession # T-001-2013

*P6. Date Constructed/Age and Sources: ☐Historic ■Prehistoric ☐Both

*P7. Owner and Address:
City of Tustin
300 Centennial Way
Tustin, California 92780

*P8. Recorded by: (Name, affiliation, and address)
Geraldine Aron
Paleo Solutions Inc.
911 S. Primrose, Unit J
Monrovia, CA 91016

*P9. Date Recorded:
*P10. Survey Type: (Describe)
Grading Monitoring

*P11. Report Citation: (Cite survey report and other sources, or enter "none.")

Final Archaeological Monitoring Report for the Tustin Legacy Project, City of Tustion, Orange County, California, by Mark Deering, Joan Brown and William A. Sawyer. Paleo Solutions Inc., Monrovia, CA, March 2013.

*Attachments: ☐NONE ■Location Map ■Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ■Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ■Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHAEOLOGICAL SITE RECORD

Primary #
Trinomial

 *Resource Name or #: TL-01 (loci A to D)

*A1. Dimensions: a. Length: 487 m. ( ) × b. Width: 183 m. ( )
Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: GPS assisted GIS mapping.
Method of Determination (Check any that apply.): ■ Artifacts ■ Features ☐ Soil ☐ Vegetation ☐ Topography
☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ■ Other (Explain): Monitoring discovery

Reliability of Determination: ■ High ☐ Medium ☐ Low Explain: This site was discovered during grading monitoring. The artifacts were shot with GPS, recorded and collected. The site is now graded out.

Limitations (Check any that apply): ☐ Restricted access ■ Paved/built over ☐ Site limits incompletely defined
☐ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: 70 to 100 cm ☐ None ☐ Unknown Method of Determination: field notes and drawings
*A3. Human Remains: ☐ Present ■ Absent ☐ Possible ☐ Unknown (Explain):

*A4. Features (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map.):
One feature (feature 1) was found and occurred in locus A. This feature was a groundstone tool cache, consisting of a tight cluster of one sandstone slab, 4 metates and 6 handstones in an area about a 80 cm in diameter. Metates ranged in size from 12 to 46 cm in diameter. and in composition from friable sandstone to highly resistant andesitic volcanic rock. A variety of basin depths were exhibited by these tools ranging from nearly flat to medium depth (0.5 to 6.5 cm in depth). Only two manos and one metate from this feature were fire affected, and two other culturally unmodified fragments of FAR were recovered.

*A5. Cultural Constituents (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.):
This site occurs in four loci at roughly the same stratigraphic layer within the general measured site area. The principle constituents of the site are groundstone tools and a groundstone tool cache feature. See continuation sheet for more details.

*A6. Were Specimens Collected? ☐ No ■ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)
*A7. Site Condition: ☐ Good ■ Fair ☐ Poor (Describe disturbances.): The site condition was only fair at time of discovery due to heavy equipmet traffic. The site has now been destroyed.

*A8. Nearest Water (Type, distance, and direction.): The nearest perennial water is 2 km to the east at Peters Canyon Channel. This drainage has been channelized; its location at the time that the site was formed is indeterminate.
*A9. Elevation: 48 to 52 ft AMSL.
A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.):
The site is located on the Tustin Plain in the city of Tustin in Orange County, California.. The Tustin Plain is naturally in the California Coastal Grasslands biotic community, though it has mostly become developed for residential and commercial use in recent years.

A11. Historical Information:
The site area was used as a military base (Naval Air Station Santa Ana and later Tustin Marine Base) from 1942 to 1999. Prior to that the area was ranch land and part of the Irvine Ranch. Hearsay evidence suggests that the area was marshy in the past, though this has not been confirmed.

*A12. Age: ■ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945
☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known:**

The presence of a Vandenberg contracting stem projectile point is the only significant chronological indicator collected near the site. However because this projectile point occurred in a buried stream channel from outside the site boundary, it provides little evidence about the site itself. It is considered an isolate and is described in a separate record.

A13. Interpretation (Discuss data potential, function[s], ethnic affiliation, and other interpretations):
This site is interpreted as prehistoric Native American a day-use seed gathering and food preparation site. The absence of fire features suggests that the site was not a habitation site, though the occurrence of some FAR prevents us from ruling out the possibility that some features were scattered during excavation. Furthermore, the lack of significant quantities of debitage or chipped stone tools suggests that that the site was specialized for seed-collection. Most of the metates were of nearly flat (n=0.5 cm) to shallow (n=1.5 to 4 cm) to medium depth (n=4.5 to 6.5 cm).

A14. Remarks: See continuation sheet for additional details

A15. References (Documents, informants, maps, and other references):
Final Archaeological Monitoring Report for the Tustin Legacy Project, City of Tustion, Orange County, California, by Mark Deering, Joan Brown and William A. Sawyer. Paleo Solutions Inc., Monrovia, CA, March 2013.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record.):

Please see attached DPR Photograph Record form.

Original Media/Negatives Kept at:
*A17. Form Prepared by: **Date:** 3/15/2013
Affiliation and Address: Mark R. Deering, Paleo Solutions Inc., 911 S. Primrose Ave, Unit J, Monrovia, CA 91016

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI#
Trinomial

 *Resource Name or # (Assigned by recorder) TL-01

*Recorded by: Mark R. Deering *Date: 3/15/2013 ■ Continuation ☐ Update

Further description of cultural constituents for site TL-01:

The principle constituents of the site are groundstone tools and a groundstone tool cache feature. Metates and metate fragments (n=455) were recovered, ninteen of which show signs of fire affectation. Manos and mano fragments (n=90), of which 5 showed signs of fire affectation were also recovered. Scattered marine shells and shell fragments were distributed over loci A, B and C (Argopecten (n=1), Astrea (n=3), Euvola (n=2), Haliotis (n=5), Megathura (n=1), Norrisia (n=1), and indeterminate (n=1)). One blue schist groundstone tube was also recovered. This artifact measures 15 cm in length and has a diameter ranging from 9 cm to 5 cm.Its interior diameter is from 2 to 4 cm.

Locus A contained 410 fragments of groundstone representing 48 tools (handstones (n=24), netherstones (n=22), sandstone slab (n=1),and a ground blue schist tube (n=1)). In addition, locus A contained 4 chipped stone artifacts (cores (n=2), flake (n=1), and scrapers (n=1)) and 4 marine shells. Locus B was approximately 120 yards to the northnortheast of locus A and consisted of another groundstone scatter containing 7 metates and 17 handstones. Locus B also contained 6 chipped stone artifcats (tested cobbles (n=2), scrapers (n=2), flake (n=1), and shatter (n=1)) and 8 marine shells. Locus C consisted of a loose scatter of 3 groundstone artifacts (metates (n=2) and manos (n=1)). Locus C also contained 2 marine shells. Locus C was located about 50 meters south of locus B. Locus D consisted of a tight cluster of 4 metates and 1 mano in an area of about 2 meters in diameter. This locus was located about 110 meters west of locus B. All loci of the site were stratigraphically in the same layer about 2 to 3 feet below natural surface in a dark brown silty sand soil layer.

No fire features were discovered at the site though occasional fragments of FAR (n= 78) occurred in disassociation from each other, most of these pieces were groundstone tool fragments (n=72).

Further description of environmental setting:

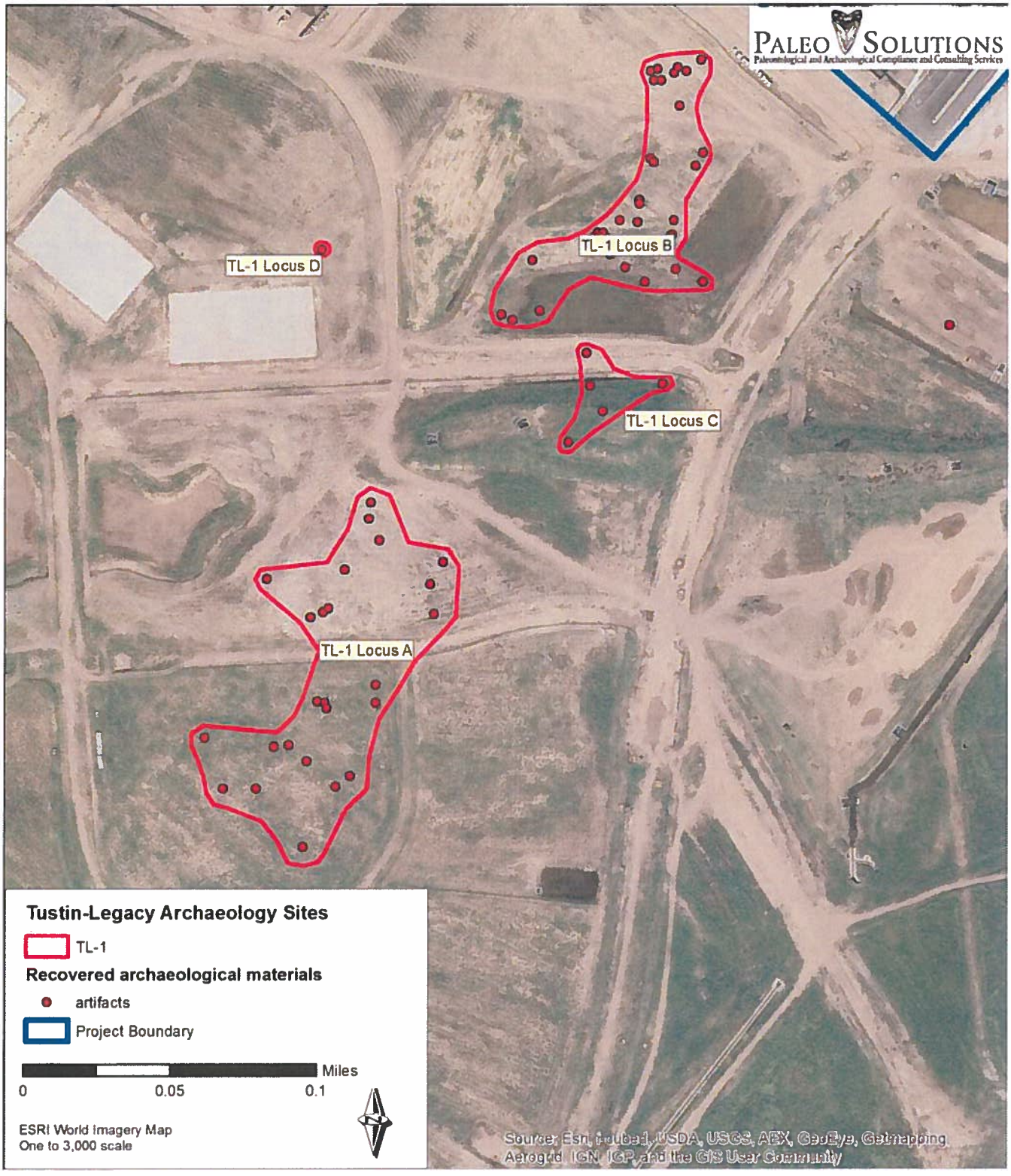
The area is a flat low-lying plain with relatively poor drainage and numerous intermittent and perennial streams and channels in the vicinity. Riparian enviroments probably occurred within a kilometer of the site. Soils in the general vicinity of the site consist of Chino series silty clay loam with layers of less clayer sand and silty sand (USDA Web Soil Survey description). Geologically, the site is located on Holocene alluvial fan deposits. The water table is currently about 2 meters below the surface but may have varied climatically and as a result of irrigation in recent times. Numerous grasses and herbs would have been available in the vicinity of the site, as well as small to medium game animals. Currently the area is frequented by migrating birds as well as raptors and crows.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

Page 4 of 21 *Resource Name or # (Assigned by recorder) TL-01 Overview

*Drawn By: Mark R. Deering *Date: 3/15/2013

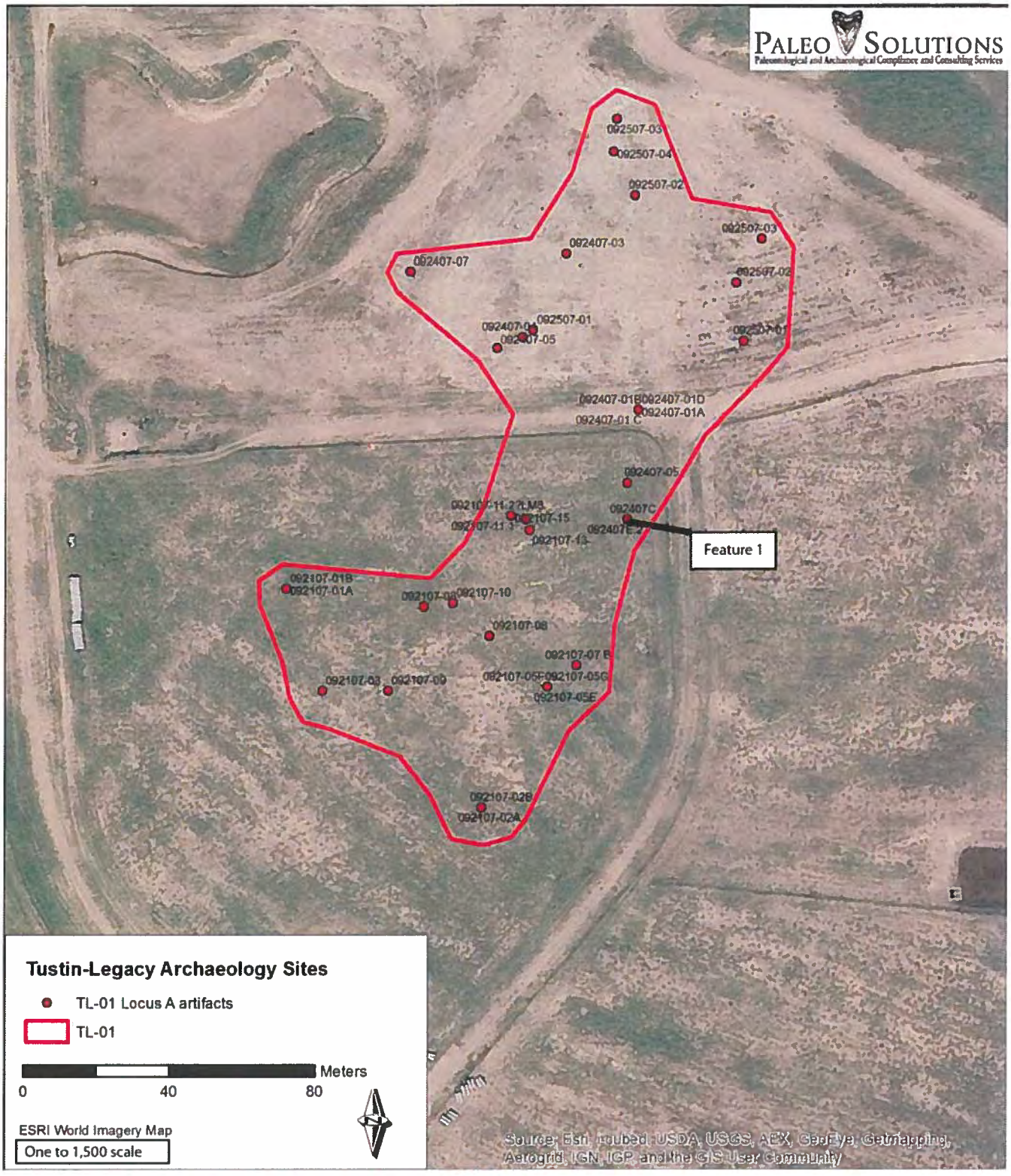


State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

Page 5 **of** 21 ***Resource Name or #** (Assigned by recorder) TL-01 Locus A

***Drawn By:** Mark R. Deering ***Date:** 3/15/2013



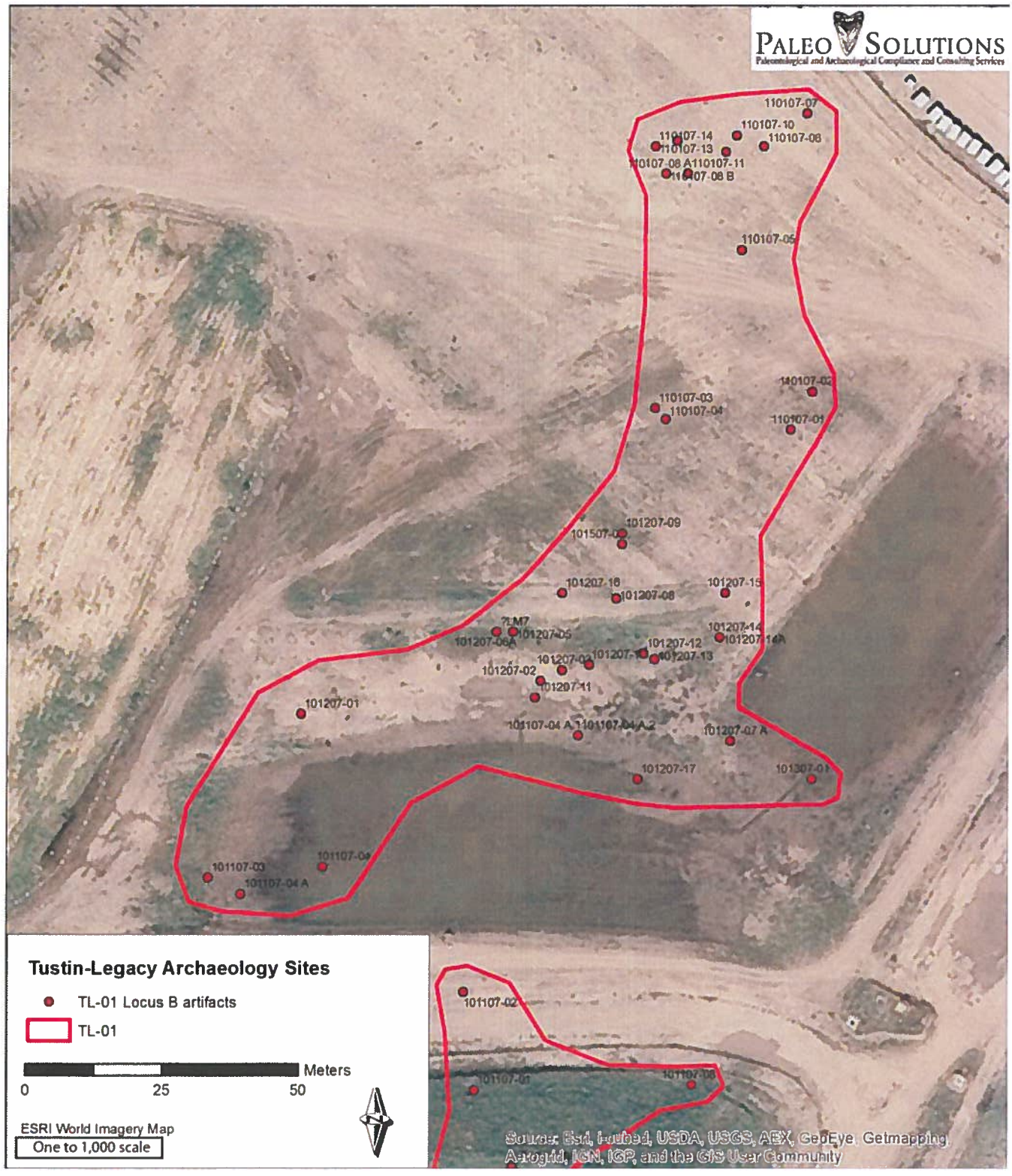
***Required information**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

Page 6 of 21 *Resource Name or # (Assigned by recorder) TL-01 Locus B

*Drawn By: Mark R. Deering *Date: 3/15/2013



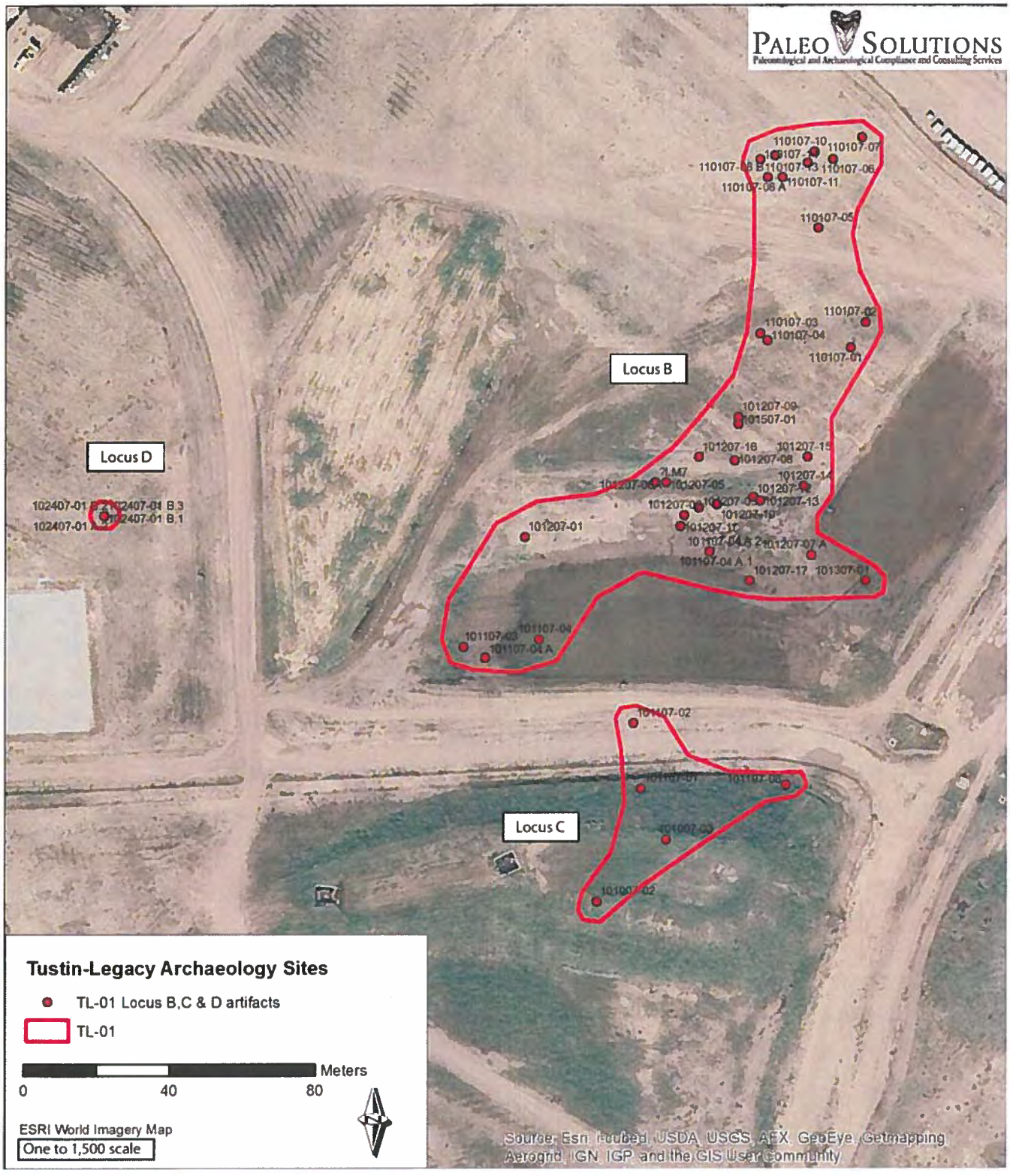
DPR 523K (1/95) *Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

Page 7 of 21 *Resource Name or # (Assigned by recorder) TL-01 Loci B to D

*Drawn By: Mark R. Deering *Date: 3/15/2013



DPR 523K (1/95)

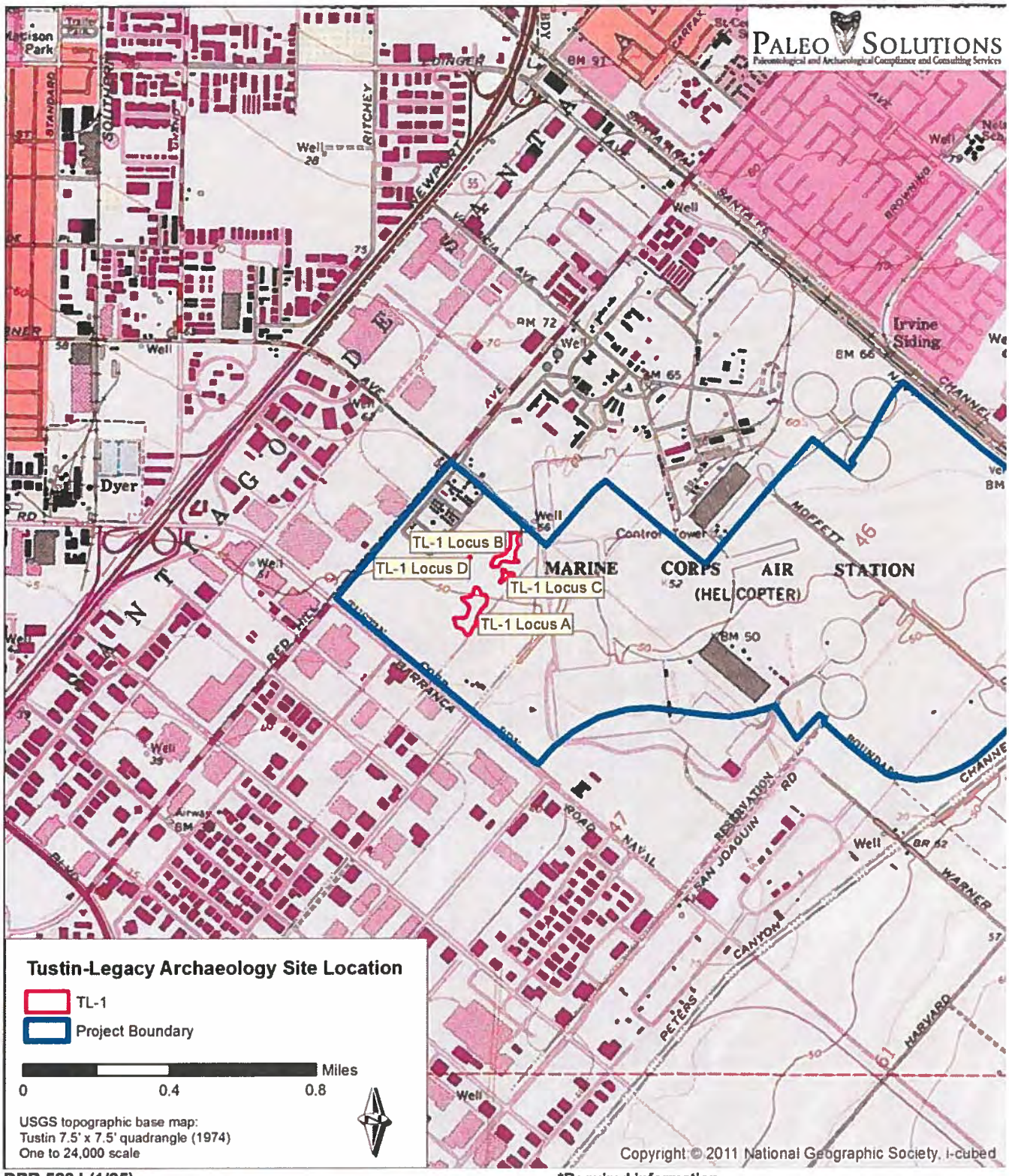
*Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 8 of 21 *Resource Name or #: Archaeology site TL-01

*Map Name: Tustin quadrangle *Scale: 1 to 24,000 *Date of Map:



DPR 523J (1/95) *Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PHOTOGRAPH RECORD

Primary #
HRI#
Trinomial

Page 9 **of** 21 **Resource Name or #:** TL-01 **Year** 2007

Camera Format: Digital Lens Size: 35mm
Film Type and Speed: Digital Negatives Kept at: Photos are digital

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
9	21	3:02	IMG_4651	Site overview	west	T-001-2013
9	21	3:02	IMG_4652	Site overview	southwest	T-001-2013
9	24	10.53	IMG_4653	Feature 1: partially excavated	superior	T-001-2013
9	24	11:14	IMG_4654	Feature 1: partially excavated	superior	T-001-2013
9	24	11:15	IMG_4655	Feature 1: partially excavated	superior	T-001-2013
9	24	11:15	IMG_4656	Feature 1: partially excavated	superior	T-001-2013
9	24	11:41	IMG_4657	Sandstone slab	superior	T-001-2013
9	24	11.41	IMG_4658	Sandstone slab	superior	T-001-2013

Tustin Legacy Project: Prehistoric Archaeological Inventory: Site TL-01

Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
092107-01A	TL-01 locus A		groundstone	mano	1	1	802.2g	422414	3729749
092107-01B	TL-01 locus A		groundstone	mano	2	1		422414	3729749
092107-02A	TL-01 locus A		groundstone	mano	1	1	1484.6g	422468	3729689
092107-02B	TL-01 locus A		groundstone/FAR	mano, FAR	3	1	1294.2g	422468	3729689
092107-03	TL-01 locus A		groundstone	metate/lapstone	2	1	3718g	422424	3729721
092107-05A	TL-01 locus A		groundstone	metate	10	1	1755g	422486	3729722
092107-05B	TL-01 locus A		groundstone	metate	3	1	1530g	422486	3729722
092107-05C	TL-01 locus A		groundstone	metate	15	1	1470g	422486	3729722
092107-05D	TL-01 locus A		groundstone	metate	30	1	2580g	422486	3729722

30-001725

Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
092107-05E	TL-01 locus A		groundstone	metate	30	1	2105g	422486	3729722
092107-05F	TL-01 locus A		groundstone	metate	1	1	777.6g	422486	3729722
092107-05G	TL-01 locus A		groundstone	metate	14	1	320.3g	422486	3729722
092107-06	TL-01 locus A		groundstone	mano	1	1	1530g	422470	3729736
092107-07 B	TL-01 locus A		marine shell	pecten shell	4	1	1.3g	422494	3729728
092107-07A	TL-01 locus A		groundstone/FAR	mano, FAR	8	1	1268.1g	422494	3729728
092107-08	TL-01 locus A		chipped stone	core	2	2	112.8g	422452	3729744
092107-09	TL-01 locus A		groundstone	mano	2	1	1108.0g	422442	3729721
092107-10	TL-01 locus A		groundstone/FAR	mano, FAR	15	1	1205g	422460	3729745
092107-11.1	TL-01 locus A		groundstone	metate	37	1	1535g	422476	3729769

30-001725

Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
092107-11.2	TL-01 locus A		groundstone	metate	12	1	1640g	422476	3729769
092107-12	TL-01 locus A		groundstone	sucking tube	2	1	613.4g	422480	3729768
092107-13	TL-01 locus A		marine shell	cf. Astrea sp.	1	1	359.6g	422481	3729765
092107-15	TL-01 locus A		groundstone	metate	29	1	8700g	422476	3729769
092407-01 C	TL-01 locus A		groundstone	mano	1	1	909.5g	422511	3729798
092407-01A	TL-01 locus A		groundstone	mano	6	1	518.2g	422511	3729798
092407-01B	TL-01 locus A		marine shell	Megathura crenulata	7	1	30.5g	422511	3729798
092407-01D	TL-01 locus A		groundstone	mano	1	1	1319.5g	422511	3729798
092407-03	TL-01 locus A		chipped stone	scraper	1	1	24.7g	422491	3729841
092407-04	TL-01 locus A		groundstone/FAR	mano, FAR	4	1	1057.9g	422479	3729818

30-001725

Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
092407-05	TL-01 locus A		FAR	FAR	1	1	1269.8g	422472	3729815
092407-05	TL-01 locus A		groundstone	mano	1	1	1253.6g	422508	3729778
092407-06	TL-01 locus A		marine shell	cf. Euvola sp.	1	1	15.8g	422508	3729768
092407-07	TL-01 locus A		groundstone	metate/lapstone	9	1	4035g	422448	3729836
092407A.03	TL-01 locus A	1	groundstone	mano	1	1	878.4g	422508	3729768
092407A.04	TL-01 locus A	1	groundstone	mano	1	1	1204.1g	422508	3729768
092407A.05	TL-01 locus A	1	groundstone	mano	1	1	745.4g	422508	3729768
092407A.06	TL-01 locus A	1	groundstone	handstone	1	1	564.8g	422508	3729768
092407A.07	TL-01 locus A	1	FAR	FAR	2	1	236.5g	422508	3729768
092407A.08	TL-01 locus A	1	groundstone/FAR	metate, FAR	3	1	472.6g	422508	3729768

30-001725

Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
092407A.09	TL-01 locus A	1	chipped stone	flake/debitage	1	1	6.0g	422508	3729768
092407A.10	TL-01 locus A	1	groundstone/FAR	mano, FAR	1	1	283.8g	422508	3729768
092407A.11	TL-01 locus A	1	FAR	FAR	1	1	95.9g	422508	3729768
092407B.1	TL-01 locus A		groundstone	slab/manuport	8	1	345.8g	422508	3729768
092407B.2	TL-01 locus A		groundstone	slab/manuport	2	1	3265g	422508	3729768
092407C	TL-01 locus A		groundstone	metate	12	1	16420g	422508	3729768
092407D.1	TL-01 locus A	1	groundstone	slab/manuport	15	1		422508	3729768
092407D.2	TL-01 locus A		groundstone	metate	49	1		422508	3729768
092407E.1	TL-01 locus A	1	groundstone	metate	22	1		422508	3729768
092407E.2	TL-01 locus A	1	groundstone	metate	6	1		422508	3729768

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Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
092507-01	TL-01 locus A		groundstone/FAR	mano, FAR	1	1	738.6g	422540	3729817
092507-01	TL-01 locus A		groundstone	mano	1	1	1550g	422482	3729820
092507-02	TL-01 locus A		groundstone/FAR	mano, FAR	1	1	672.1g	422510	3729857
092507-02	TL-01 locus A		groundstone	metate	30	1	8910g	422538	3729833
092507-03	TL-01 locus A		groundstone	mano	1	1	1041.9g	422545	3729845
092507-03	TL-01 locus A		groundstone/FAR	mano, FAR	9	1	1339.1g	422505	3729878
092507-04	TL-01 locus A		groundstone/FAR	mano, FAR	1	1	845.6g	422504	3729869
101007-02	TL-01 locus C		groundstone	mano	1	1	800.4g	422614	3729911
101007-03	TL-01 locus C		groundstone	metate	1	1	7105g	422633	3729928
101107-01	TL-01 locus C		groundstone	metate	1	1	11055g	422626	3729942

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Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
101107-02	TL-01 locus C		marine shell	cf. Astrea sp.	2	1	10.9g	422624	3729960
101107-03	TL-01 locus B		marine shell	Haliotis crocherodii	1	1	11.1g	422577	3729981
101107-04	TL-01 locus B		marine shell	Haliostis crocherodii	1	1	408.6g	422598	3729983
101107-04 A	TL-01 locus B		groundstone	mano	1	1	864.7g	422583	3729978
101107-04 A.1	TL-01 locus B		groundstone	metate	10	1	1147g	422645	3730007
101107-04 A.2	TL-01 locus B		groundstone	metate	2	1	2640g	422645	3730007
101107-08	TL-01 locus C		marine shell	Norrisia morrisii	1	1	23.0g	422666	3729943
101207-01	TL-01 locus B		marine shell	Haliotis corrugata	1	1	24.6g	422594	3730011
101207-03	TL-01 locus B		groundstone/FAR	mano, FAR	1	1	773.4g	422642	3730019
101207-05	TL-01 locus B		marine shell	Haliotis fulgens	1	1	138.4g	422633	3730026

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Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
101207-06A	TL-01 locus B		groundstone	mano	1	1	1825g	422633	3730026
101207-07 A	TL-01 locus B		groundstone/FAR	mano, FAR	1	1	1620g	422673	3730006
101207-08	TL-01 locus B		chipped stone	scraper	1	1	534.3g	422652	3730032
101207-09	TL-01 locus B		groundstone	mano	1	1	2030g	422653	3730044
101207-10	TL-01 locus B		groundstone	metate	6	1	9707g	422647	3730020
101207-11	TL-01 locus B		groundstone	metate	3	1	7525g	422637	3730014
101207-12	TL-01 locus B		groundstone	metate	1	1	4275g	422657	3730022
101207-13	TL-01 locus B		groundstone	mano	1	1	1235.8g	422659	3730021
101207-14	TL-01 locus B		groundstone	mano	1	1	308.8g	422671	3730025
101207-14A	TL-01 locus B		groundstone	mano	1	1	1680g	422671	3730025

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Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
101207-15	TL-01 locus B		groundstone/FAR	metate, FAR	2	1	1521.6g	422672	3730033
101207-16	TL-01 locus B		marine shell	cf. Argopecten sp.	1	1	9.9g	422642	3730033
101207-17	TL-01 locus B		groundstone	metate	1	1	19635g	422656	3729999
101307-01	TL-01 locus B		groundstone/FAR	mano, FAR	1	1	1542g	422688	3729999
101507-01	TL-01 locus B		chipped stone	tested cobble	1	1	394.0g	422653	3730042
102407-01 A.1	TL-01 locus D		groundstone/FAR	metate, FAR	4	1	1485.7g	422478	3730017
102407-01 A.2	TL-01 locus D		groundstone/FAR	mano, FAR	3	1	356.0g	422478	3730017
102407-01 B.1	TL-01 locus D		groundstone	metate	1	1	40.4g	422478	3730017
102407-01 B.2	TL-01 locus D		groundstone/FAR	metate, FAR	8	1	41.3g	422478	3730017
102407-01 B.3	TL-01 locus D		groundstone	metate	1	1	9400g	422478	3730017

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Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
110107-01	TL-01 locus B		groundstone	mano	1	1	1745g	422684	3730063
110107-02	TL-01 locus B		groundstone	mano	1	1	1590g	422688	3730070
110107-03	TL-01 locus B		groundstone	handstone	1	1	934.9g	422659	3730067
110107-04	TL-01 locus B		groundstone	mano	1	1	1590g	422661	3730065
110107-05	TL-01 locus B		hammerstone	hammerstone/tested cobble	1	1	508.8g	422675	3730096
110107-06	TL-01 locus B		groundstone/FAR	mano, FAR	2	1	708.1g	422679	3730115
110107-07	TL-01 locus B		chipped stone	debitage/shatter	1	1	300.4g	422687	3730121
110107-08 A	TL-01 locus B		chipped stone	scraper	1	1	26.0g	422661	3730110
110107-08 B	TL-01 locus B		marine shell	indeterminate shell	1	1	1.0g	422661	3730110
110107-09A	TL-01 locus B		groundstone/FAR	mano, FAR	1	1	1559.8g	422672	3730114

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Catalog Number	Site Number	Feature Number	General Artifact Type	Artifact Type	Number of Fragments	Mininum Number	Weight	Easting (UTM)	Northing (UTM)
110107-09B	TL-01 locus B		FAR	FAR	1	1	201.5g	422672	3730114
110107-10	TL-01 locus B		marine shell	cf. Astrea undosa	1	1	98.6g	422674	3730117
110107-11	TL-01 locus B		chipped stone	flake	1	1	391.4g	422665	3730110
110107-13	TL-01 locus B		groundstone	mano	1	1	1136.9g	422659	3730115
110107-14	TL-01 locus B		FAR	FAR	1	1	308.5g	422659	3730115
111107-12A	TL-01 locus B		groundstone/FAR	mano, FAR	1	1	1715g	422663	3730116
111107-12B	TL-01 locus B		chipped stone	tested cobble	1	1	417.0g	422663	3730116
LM7	TL-01 locus B		marine shell	cf. Haliotis sp.	1	1	702.3g	422630	3730026
LM8	TL-01 locus A		groundstone/FAR	metate, FAR	2	1	2245g	422476	3729769

30-001725

State of California C The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Reviewer Date

Review Code

 ***Resource Name or #:** (Assigned by recorder) TL-Lot19-01/H
P1. Other Identifier:

*P2. **Location:** ■Not for Publication **Unrestricted**
*a. **County** Orange County **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
*b. **USGS 7.5' Quad** Tustin **Date** 1965 photo revised 1972 **T** 5S; **R** 9W ; NW ¼ **of** SE ¼ **of Sec** 46; **B.M.**
c. Address City Tustin Zip 92782
d. UTM: (Give more than one for large and/or linear resources) Zone 11S, 424160mE/ 3729837mN; 11S, 424144mE/ 3729607mN; Zone 11S, 424624mE/ 3729693mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)
Isolates are were observed east of Tustin Ranch Rd, north of Victory Rd, west of Lancea Pl, and south of and along Moffett Dr.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
TL-Lot19-01 includes fourteen (20150909DDS.01H, 20150914BCC.01H, 20150921BCC.01H, 20150922BCC.01H, 20150922BCC.02H, 20150923BCC.01H, 20150925CDG.01H, 20150928DDS.01H, 20150929BCC.01H, 20150930JMP.01H, 20151013BCC.01H, 20151014BCC.01H, 20151015BCC.01H, 20151019BCC.01H) historic-era artifacts and artifact concentrations (totaling 687 pieces) and one prehistoric artifact (20151001BCC.01). These artifacts were collected from the disturbed mixed-fill layers that extend across the entire Project area. Detailed descriptions follow in the continuation forms.

***P3b. Resource Attributes:** (List attributes and codes) AP16, HP34, AH4, AH16

***P4. Resources Present:** Building Structure Object X Site District Element of District ■ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) View West, 9/10/2015, Overview of work area

***P6. Date Constructed/Age and Source:** Historic Prehistoric ■Both

***P7. Owner and Address:**
City of Tustin
300 Centennial Way
Tustin, CA 92780

***P8. Recorded by:** (Name, affiliation, and address) David Schroeder, Cecilio Garcia, Jennifer Peterson, Brittany Cleary

Paleo Solutions Inc,
911 S. Primrose Ave Unit N,
Monrovia, CA 91016

***P9. Date Recorded:** 9/9/15, 9/14/15, 9/21/15, 9/22/15, 9/23/15, 9/28/15, 9/29/15, 9/30/15, 10/1/15, 10/13/15, 10/14/15, 10/15/15,10/19/15

***P10. Survey Type:** (Describe) Monitoring

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.")
City of Tustin. 2015. Our History: Honoring a Military Legacy. Electronic document: http://www.tustinca.org/depts/ed/legacy/legacy/history.asp, accessed December 16, 2015.

Collectors Weekly. 2015. *Antique Insulators*. Electronic document: http:// http://www.collectorsweekly.com/tools-and-hardware/insulators, accessed December, 2015.

State of California C The Resources Agency
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Trinomial
NRHP Status Code

Other Listings
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Review Code

Page 2 **of** 38 ***Resource Name or #:** (Assigned by recorder) TL-Lot19-01/H
P1. Other Identifier:

Costello, Shannon. 2011. Gebhardts Chili Powder Co. Electronic document: https://lacocinahistorica.wordpress.com/2011/02/18/gebhardts-chili-powder-co/, accessed December 10, 2015.

Kay, Michael. 2016. Personal Communications. January 2016.

Lamb, Meghan. 2016 Archaeological Resources Monitoring Report: Lot 19 Tustin Legacy (Tustin Air Base) Project, City of Tustin, Orange County, California. Paleo Solutions Inc.

Lehner, Lois. 1988. Alphabetical Listing of Factories in *Lehner's Encyclopedia of U.S. Marks on Pottery, Porcelain & Clay*. Pp. 354. Collector Books.

Lindsey, Bill. 2015. Historic Glass Bottle Identification & Information Website. Electronic document: http://www.sha.org/bottle/, accessed December 16, 2015.

Lockhart, Bill, Beau Schreiver, Carol Serr, and Bill Lindsey, with contributions by Joe Widman. 2014. Pitcher's and Fletcher's Castoria An Uncommon Study of Common Bottles. Electronic document: http://www.sha.org/bottle/pdffiles/CastoriaHistory.pdf, accessed December 8, 2015.

Lockhart, Bill, Carol Serr, Bill Lindsey,and Beau Schriever. 2015. E.R. Durkee & Co. and the Misunderstood Durkee Bottles. Electronic Document: http://www.thepotteries.org/mark/reg.htm, accessed December 10, 2015.

North American Company. 1918. Ingram's Milkweed Cream Jar Advertisement in Everybody's Magazine Vol 38 pf 101. Electronica document: https://books.google.com/books?id=PKFGAQAAIAAJ&pg=RA4-PA101&dq=ingrams+milkweed+cream+jar&hl=en&sa=X&ved=0ahUKEwiCqcrP-NTJAhUY32MKHbhXCSYQ6AEINDAC#v=onepage&q&f=false, accessed December 10, 2015.

Russell David. 2015. Glass Bottle Marks. Electronic document: http://www.glassbottlemarks.com/, accessed December 10, 2015.

Sacksteder, Dorrie. 2005. The East Palestine Pottery Company/W.S. George Pottery Company. Electronic document: http://wsgeorge.jdfiles.org/, accessed December 10, 2015.

Then National Archives. 2015. Diamond Marks and Trade Marks. Electronic document: http://www.nationalarchives.gov.uk/help-with-your-research/research-guides/diamond-marks-trade-marks/#7-diamond-mark-year-codes, accessed December 10, 2015.

***Attachments:** NONE ■Location Map ■Continuation Sheet Building, Structure, and Object Record
Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
■Artifact Record ☐Photograph Record ■Other (List): Sketch Map

20150909DDS.01H is a historic artifact concentration consisting of fourteen items totaling fifty-five pieces. 20150914BCC.01H is a complete glass bottle with a machine made body (1905 – 1950s, Lindsey 2015). 20150921BCC.01H is a medicine bottleneck and finish. It has a machine-made, double-ring finish. This was manufactured by Centaur Co., Samuel Pitcher & Co., or J.B. Rose & Co (1914 to 1919, Lockhart et al 2014).

20150922BCC.02H is a historic artifact concentration consisting of fourteen items totaling seventy-two pieces. 20150922BCC.01H consists of twenty-one glass bottle fragments. One piece has a machine made neck and finish (1905 – 1950s, Lindsey 2015). The remaining glass bottle fragments have no identifiable marks. 20150923BCC.01H is a glass medicine bottle with a "Standard" tooled finish, meaning "mouth blown" or "hand made" bottle with "FREDERICK STEARNS & CO DETROIT MICH USA" is visible (1820 – 1915, Lindsey 2015). 20150925CDG.01H is a historic artifact concentration consisting of nine items (totaling eighty-five pieces). 20150928DDS.01H is a historic artifact concentration consisting of forty-six items (totaling 458 pieces). 20150929BCC.01H is a brown porcelain insulator with "PINCO" encircled by a rounded rectangle at the base; it is manufactured by The Porcelain Insulator Company (PINCO) (1921 – 1987, Lehner 1988).

20151013BCC.01H consists of a glass bottle double-ring finish fragment with a possible "picnic" style flask (1890 – 1915, Lindsey 2015), and a ceramic plate fragment with no identifying marks. 20151014BCC.01H is a military spoon with "U.S.N." and "NATIONAL Stainless" visible (1942 – 1999, City of Tustin 2015). 20151015BCC.01H is a machine made glass bottle finish fragment with a (1905 – 1950s, Lindsey 2015). 20151019BCC.01H consists of two brown porcelain insulator fragments with no identifying marks (Late 19th to early 20th Century, Collectors Weekly 2015). 20151001BCC.01 is a mano found in fill sediment.

Further description of historic artifact concentrations 20150909DDS.01H, 20150922BCC.02H, 20150925CDG.01H, and 20150928DDS.01H:

20150909DDS.01H: one fragmented glass bottle with "Holly Springs & Soda Works Hollywood California" visible with a rectangular plate mold & post bottom mold and weighing 295g (Possibly Coca Cola 1860-1870); one glass bottle "Los Angeles Ice & Cold Storage Co. Los Angeles Cal Bottle Is Not Sold" visible with a cup-bottom mold weighing 390g (Puritas (Arrowhead) 1850-1915); one glass bottle fragmented with "Schumacher & Sch" and "Santa Ana" visible with a cup bottom mold weighing 45g (1850 – 1920); one glass bottle base fragment with "SIƨ ELBA MFG CHICAGO RECUS" visible with a post bottom mold weighing 20g (1860 – 1890); one glass finish fragment with "Standard" tooled finish meaning "mouth blown" or "hand made" bottle weighing 65g (1820 – 1915); one glass medicine bottle with "Castoria" and "Chas. H. Fletcher's" on side panels and embossed "C" on base with no number or dots and manufactured by Owens Bottle Machine Co. weighing 125g (1912 – 1917); one glass medicine bottle fragmented with "Cas"

visible on fragmented side panel, machine made finish and two part "double-ring" finish and possibly manufactured by Centaur Co., Samuel Pitcher & Co., or J.B. Rose & Co. weighing 50g (1914 – 1919); one glass cosmetic bottle with a two piece mold body, spherical with a pedestal base weighing 25g (Mid 19th – Early 20th Century); one fragmented glass serving bowl with Scalloped edge, embossed checkered pattern w/ 2 asterisk type symbol in one square weighing 100g (Mid 19th – Early 20th Century); three glass fragments with no identifiable markers weighing 110g (Mid 19th – Early 20th Century); three flatware fragments with two white (one with faded green/pink flowers), and one burnt red with gloss and white interior all weighing 40g (Mid 19th – Early 20th Century); two large mammal bones consisting of one saw cut cow distal end of femur and one smaller saw cut bone section, both collectively weighing 120g; 33 pieces of a pair of leather boots, deteriorated and in very poor condition, weighing 220g (Mid 19th – Early 20th Century).

20150922BCC.02H: one fragmented glass bottle base with machine made finish manufactured by Owens Bottle Co. weighing 40g (1919 – 1929 Lindsey 2015); one glass bottle base fragmented with "Blue Ribbon" maker's mark, "Purity" at bottom, measurement markings on side and manufactured by Standard Glass Co. weighing 35g (1908 – 1920's Lindsey 2015); one glass bottle base and side fragment with "2" on base and "A" visible one 2nd fragment, no identifiable markers and weighing 90g (Late 19th – Mid 20th Century); one glass bottle base with "I.P.C.CO.43 2" and "NET CONTENTS 22 OZ" visible along bottom edge and possibly manufactured by Illinois Pacific Coast Co. weighing 215g (1931 – 1932 Lindsey 2015); one possible large decorative glass jar lid weighing 175g; one glass Gebhardt's Easgle Chili Powder bottle manufactured by Illinois Glass Co. weighing 85g (1915 – 1929 Lindsey 2015 and Costello 2011); six glass bottle neck and finish fragments with machine made body and no identifiable marks, weighing 220g(1905 – 1950's Lindsey 2015); one badly corroded rail spike with no identifiable marks, weighing 160g(Late 19th – Mid 20th Century); one fragmented left rib bone and one metatarsal from *Sus scrofa* (pig), together weighing 10g (Late 19th – Mid 20th Century); 44 pieces of fragmented glass with no identifiable markers, all weighing a total of 705g (Late 19th – Mid 20th Century); one fragmented pot consisting of seven white pieces and two pieces with maroon exteriors and white interiors with no identifiable marks, all weighing 155g (Late 19th – Mid 20th Century); two clumps of extensively corroded wire with no identifiable marks weighing 300g (Late 19th – Mid 20th Century).

20150925CDG.01H: one glass milk bottle with "Premier" visible at top of bottle and manufactured by Owens Bottle Co., weighing 310g (1919 – 1929 Lindsey 2015); one machine-made glass bottle body, manufactured by Illinois Glass Co., weighing 350g (1915 – 1929 Lindsey 2015); nine glass bottle fragments with machine-made body and no identifiable markers, with combined pieces weighing 230g (1905 – 1950's Lindsey 2015); one fragmented glass lid with machine made body and no identifiable marks, weighing 65g (1905 – 1950's Lindsey 2015); two plates, with one nearly complete and all white, with no identifiable marks, and

one completely white plate comprising 15 fragments with no identifiable marks, with a collective weight of 50g (Late 19th – Mid 20th Century); 47 pieces of clear and amber glass fragments with no identifiable markers, weighing 170g (Late 19th – Mid 20th Century); eight fragmented ceramic pieces with no identifiable markers, weighing 40g; two possible cranial mammal bone fragments (Late 19th – Mid 20th Century).

20150928DDS.01H: one glass bottle with "Premier" visible at top of bottle, manufactured by Owens Bottle Co., weighing 300g and dated between 1919 – 1929 (Lindsey 2015); three glass bottles (possibly salad dressing) with Diamond mark manufactured by E.R. Durkee & Co, weighing 1005g and dated between 1868 – 1883 (Lockhart et al 2015, The National Archives 2015); one cobalt blue glass medicine bottle with "BROMO-SELTZER EMERSON DRUG CO. BALTIMORE, MD" visible that was manufactured by Maryland Glass Corp., weighing 135g and dated between 1916 – 1920 (Lindsey 2015); one opaque milk glass cosmetic bottle with "IGRAMS MILKWEED CREAM" and "BOTTLE PATD N. 481953" embossed at top, weighing 95g and dated 1885 – mid 20th Century (North American Company 1918, Lindsey 2015); one glass "ring pepper sauce" or "Oval ring pepper sauce" bottle, weighing 130g and dates from Late 1890's to Early 1930's (Lindsey 2015); one glass medicine bottle with a post bottom mold and "SK&F Co" visible on base, weighing 110g and dated between 1850 – 1920 (Lindsey 2015); one glass medicine bottle with post bottom mold and "JAF & Co" visible, manufactured by Illinois Glass Co., weighing 85g and dated between 1900 – 1929 (Lindsey 2015);three glass cosmetic bottles with post-bottom molds, weighing 420g and dated between 1860 – 1890 (Lindsey 2015); two small glass bottles with "Premier" visible at top of bottle with one being manufactured by Owens Bottle Co. (1919 – 1920) and Illinois Glass Co. (1915 – 1929), both weighing 235g (Lindsey 2015); one amber colored Bell-Ans pill bottle by Bell & Co, Inc. with "BELL-ANS" visible on the bottle with a cup-bottom mold manufactured by Owens Bottle Co. weighing 30g (1919 – 1920; Lindsey 2015); 16 fragments of a M&R BRAND FLAVORS Grand Ol' Extract glass bottle weighing 65g (Early 20th – Late 20th Century, Lindsey 2015); eight fragments of a glass "Pepper sauce" bottle with cup-bottom mold weighing 135g (1850 – 1920, Lindsey 2015); 87 fragments of glass Ball Perfect mason jars weighing 1080g (1913 – Mid 20th Century, Lindsey 2015); eight fragments of three-piece mold glass bottles with "W" and incomplete square on base, weighing 95g (1820 – 1920s, Lindsey 2015); 28 fragments of assorted glass bottles with one base fragment exhibiting a Diamond shaped mark with illegible writing inside, all fragments are from machine made bottles collectively weighing 620g (1905 – 1950s, Lindsey 2015); 18 fragments of glass bottles with post bottom mold, weighing 325g (1860 – 1890, Lindsey 2015); 14 fragments of a possible glass salad bottle with Diamond mark manufactured by E.R. DURKEE & CO weighing 320g (1868 – 1883, Lockhart et al 2015, The National Archives 2015); two fragments of glass bottle base with "JL&C LC" visible on base manufactured by John Lumb & Co weighing 110g (1870s – 1905, Russell 2015); 134 fragments of amber colored glass bottles, including machine made bases and tooled finishes, collectively weighing 3940g (1820 – 1950s, Lindsey 2015); two corroded metal

bottle caps, together weighing 10g (Late 19th – Early 20th Century); five nut/washer attachments, collectively weighing 25g (Late 19th – Early 20th Century); four complete and one fragmented mason jar insert with "BOYDS GENUINE PORCELAIN LINED CAP" or "GENUINE PORCELAIN FOR MASON JARS" embossed or plain, all manufactured by BOYD's and Hazel-Atlas Glass Company, together weighing 170g (1869 – 1950s, Russell 2015); fifteen fragments of a Blue Canton Ware (AKA Blue Canton), weighing 180g (Early 19th – Early 20th Century, Kay 2016); 17 fragments of flow blue plate, weighing 110g (1840s – 1920s, Kay 2016); 16 fragments of a Japanese bowl, weighing 195g (1920s – 1930s, Kay 2016); five fragments of plate with "RADISSON W.S. GEORGE" visible and manufactured by W.S. George Pottery Company weighing 115g (1904 – 1960s, Sacksteder 2005); 12 fragments of three different plates with one base having "K.T. & K S-V CHINA P.A.K." visible, manufactured by Homer Knowles Pottery, all weighing 170g (1932 – 1937, Lehner 1988); 13 fragments of plate, hand painted green and pink floral design weighing 145g (Late 19th – Early 20th Century); eight fragments of a possible Japanese white tea cup with blue lined border weighing 30g (Late 19th – Early 20th Century); 27 fragments of two tea cups weighing 125g (Late 19th – Early 20th Century); 3 fragments of a Terra cotta pot weighing 50g (Late 19th – Early 20th Century).

The Project area was found to be significantly disturbed at depths ranging between 1 and 6 feet below the present ground surface by previous use as agricultural land and past construction or use by the MCAS.

A total of 687 pieces (multiple fragments present) of historical-period artifacts and one possible prehistoric artifact were encountered and collected during construction monitoring. The artifacts were discovered as secondary deposits and not in their original context. The concentrations of historic-era artifacts comprise diagnostic materials representing a very wide range in dates, from as early as 1820 to as late as 1987. This indicates that these are most likely secondary artifact concentrations rather than discrete refuse deposits. These concentrations most likely formed as a result of the regular maintenance and upkeep of the MCAS throughout the facility's lifetime. Their historical associations have been compromised. All artifacts were displaced from their original contexts so that no information remains concerning their significance relative to human behavior or activity. The one mano collected was an isolate found in previously disturbed soil.

Twenty-four artifacts (seventy-one pieces) were curated at the John C. Cooper Archaeology and Paleontology Curation Center in Orange County, California. These include artifact #'s 87, 88, 92, 94, 27, 36, 46, 49, 50, 51, 52, 53, 55, 56, 69, 70, 71, 78, 80, 81, and 84 (see artifact table and artifact photos).

None of the artifacts are eligible for listing on the National Register of Historic Places or the California Register of Historical Resources because

they do not possess integrity of location, design, setting, materials, workmanship, feeling, and association. In addition, the artifacts are not associated with events that have made a significant contribution to the broad patterns of our history (Criterion A/1); are not associated the lives of persons significant in our past (Criterion B/2); and do not embody the distinctive characteristics of a type, period, or method of construction), or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C/3). Furthermore, all data potential in the analysis of these artifacts have been exhausted, and these artifacts have not yielded, or are not likely to yield, information important in prehistory or history (Criterion D/4).

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CONTINUATION SHEET

Property Name: City of Tustin
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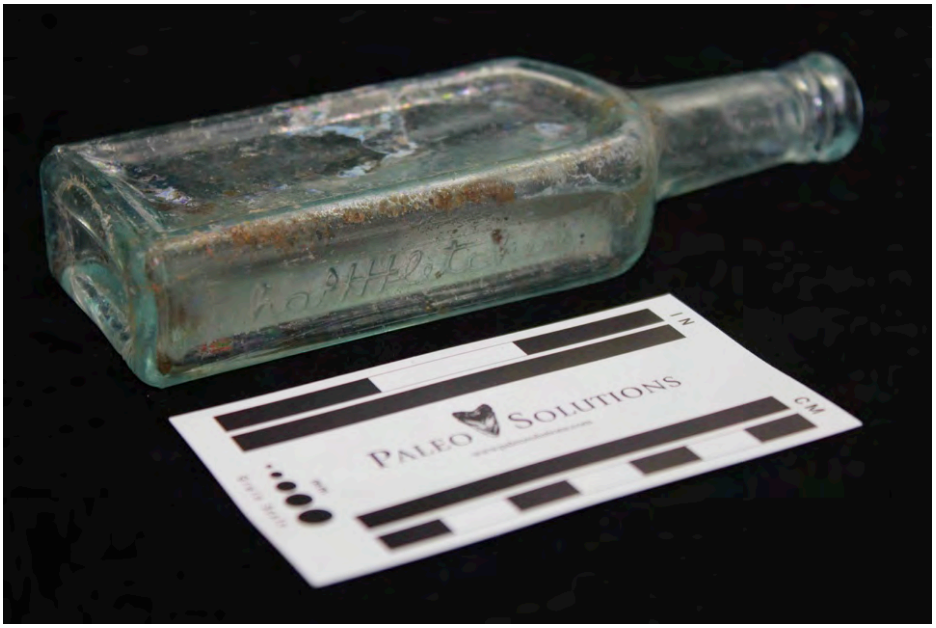
Possible Coca-Cola glass bottle. 20150909DDS.01H. Artifact #87



Medicine bottle manufactured by Owens Bottle Machine Co. 20150909DDS.01H. Artifact #92

State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

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HRI #
Trinomial

CONTINUATION SHEET

Property Name: City of Tustin
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Puritas (Arrowhead) glass bottle. 20150909DDS.01H. Artifact #88

Glass cosmetic bottle. 20150909DDS.01H. Artifact #94

State of California C Natural Resources Agency
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Trinomial

CONTINUATION SHEET

Property Name: City of Tustin
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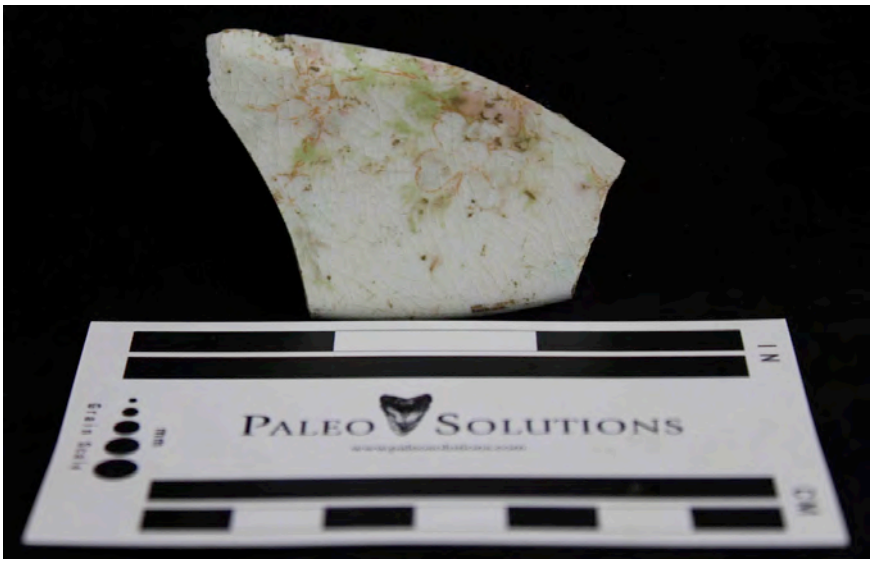
Saw cut distal end of cow femur and saw cut bone. 20150909DDS.01H. Artifact #98



Flatware fragment with green and pink flowers. 20150909DDS.01H. Artifact #97

State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

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Trinomial

CONTINUATION SHEET

Property Name: City of Tustin
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Glass bottle fragments with "Schumacher & Sch" and "Santa Ana" visible. 20150909DDS.01H. Artifact #89

Glass bottle base fragment with "SI2 ELBA MFG CHICAGO RECUS" visible. 20150909DDS.01H. Artifact #90

State of California C Natural Resources Agency
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Property Name: City of Tustin
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Bottle base fragment manufactured by Owens Bottle Co. 20150922BCC.02H. Artifact #22

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Property Name: City of Tustin
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Glass bottle fragments manufactured by Standard Glass Co. 20150922BCC.02H. Artifact #23

Glass bottle base manufactured by Illinois Pacific Coast Co. 20150922BCC.02H. Artifact #25

State of California C Natural Resources Agency
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Property Name: City of Tustin
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Glass fragment, possible large decorative glass jar lid. 20150922BCC.02H. Artifact #26

Gebhardt's Eagle Chili Powder glass bottle. 20150922BCC.02H. Artifact #27

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Property Name: City of Tustin
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Corroded rail spike. 20150922BCC.02H. Artifact #29

Left rib bone and metatarsal from *Sus scrofa* (pig). 20150922BCC.02H. Artifact #30

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Property Name: City of Tustin
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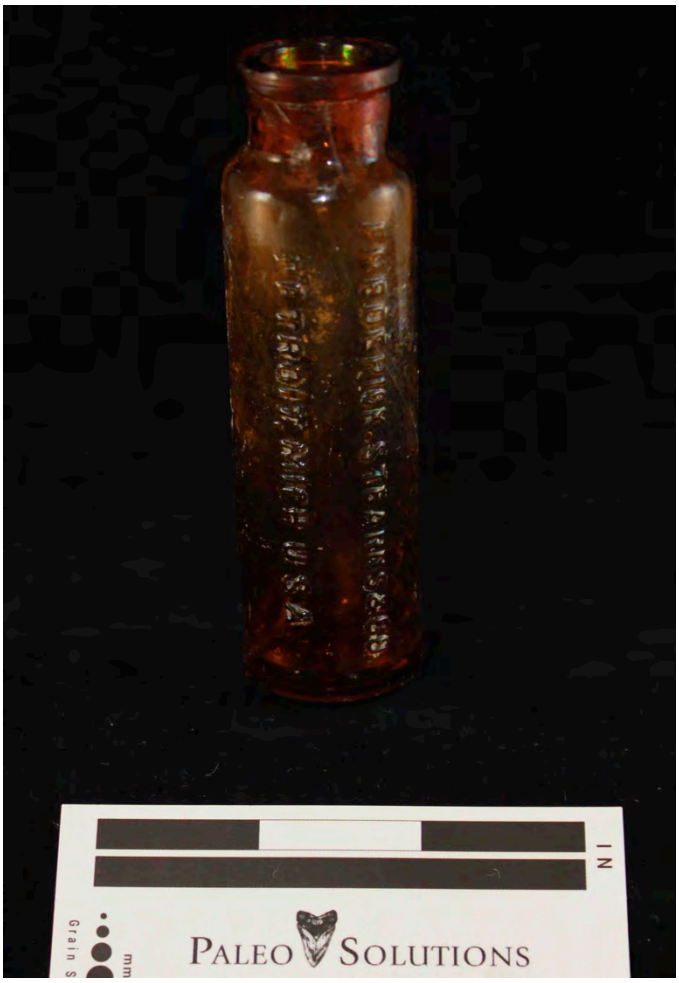

Glass medicine bottle with "FREDERICK STEARNS & CO DETROIT MICH USA" visible. 20150923BCC.01H. Artifact #36

State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

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Trinomial

CONTINUATION SHEET

Property Name: City of Tustin
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Glass bottle manufactured by Illinois Bottle Co. 20150925CDG.01H. Artifact #39

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CONTINUATION SHEET

Property Name: City of Tustin
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Mostly complete plate with no identifiable makers. 20150925CDG.01H. Artifact #42

Ceramic fragments with no identifiable markers. 20150925CDG.01H. Artifact #44

State of California C Natural Resources Agency
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Trinomial

CONTINUATION SHEET

Property Name: City of Tustin
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Possible cranial mammal bone fragments. 20150925CDG.01H. Artifact #45

Glass bottles (possibly salad dressing) manufactured by E.R. Durkee & Co. 20150928DDS.01H. Artifact #47

State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

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Trinomial

CONTINUATION SHEET

Property Name: City of Tustin
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Glass bottle with "Premier" visible, manufactured by Owens Bottle Co. 20150928DDS.01H. Artifact #46

State of California C Natural Resources Agency
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Trinomial

CONTINUATION SHEET

Property Name: City of Tustin
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Bromo-Seltzer medicine bottle manufactured by Maryland Glass Corp. 20150928DDS.01H. Artifact #49

Igrams Milkweed Cream (cosmetic bottle). 20150928DDS.01H. Artifact #50

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DEPARTMENT OF PARKS AND RECREATION

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CONTINUATION SHEET

Property Name: City of Tustin
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Ring pepper sauce (AKA oval ring pepper sauce) bottle. 20150928DDS.01H. Artifact #51

State of California C Natural Resources Agency
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CONTINUATION SHEET

Property Name: City of Tustin
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Glass medicine bottle with "SK&F Co." on base. 20150928DDS.01H. Artifact #52

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CONTINUATION SHEET

Property Name: City of Tustin
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Glass medicine bottle with "JAF & Co." visible and manufactured by Illinois Glass Co. 20150928DDS.01H. Artifact #53

Glass cosmetic bottles. 20150928DDS.01H. Artifact #54

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Property Name: City of Tustin
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Small glass bottles with "Premier" visible. 20150928DDS.01H. Artifact #55

Amber Bell-Ans pill bottle by Bell & Co, Inc. 20150928DDS.01H. Artifact #56

Fragment glass bottle "M&R BRAND FLAVORS Grand Ol" Extract bottle. 20150928DDS.01H. Artifact #57

Glass bottle fragments with British diamond marking. 20150928DDS.01H. Artifact #63

State of California C Natural Resources Agency
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Property Name: City of Tustin
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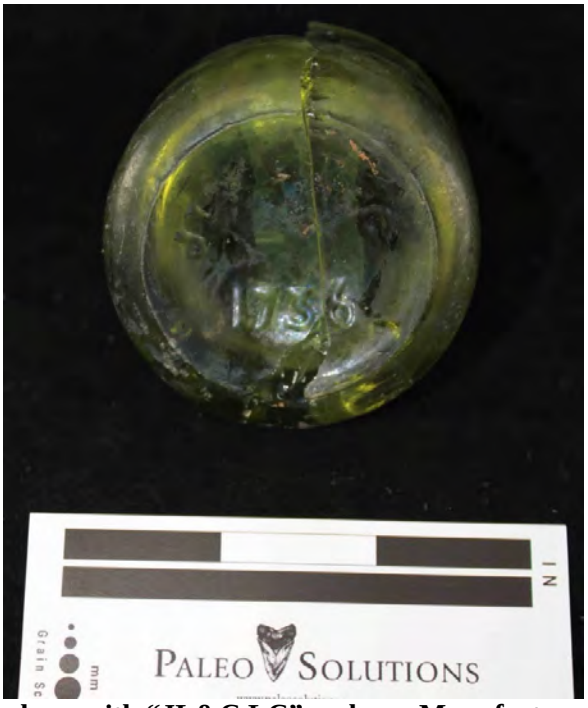
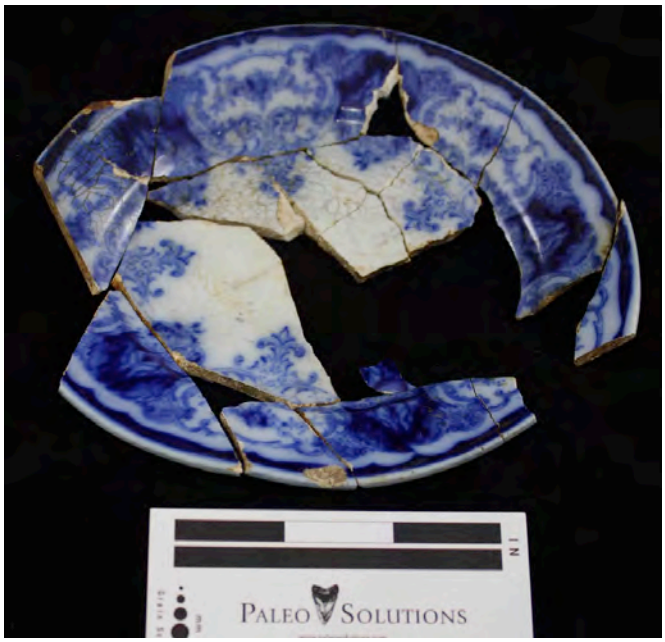


Fragmented glass bottle base with "JL&C LC" on base. Manufactured by John Lumb & Co. 20150928DDS.01H. Artifact #64

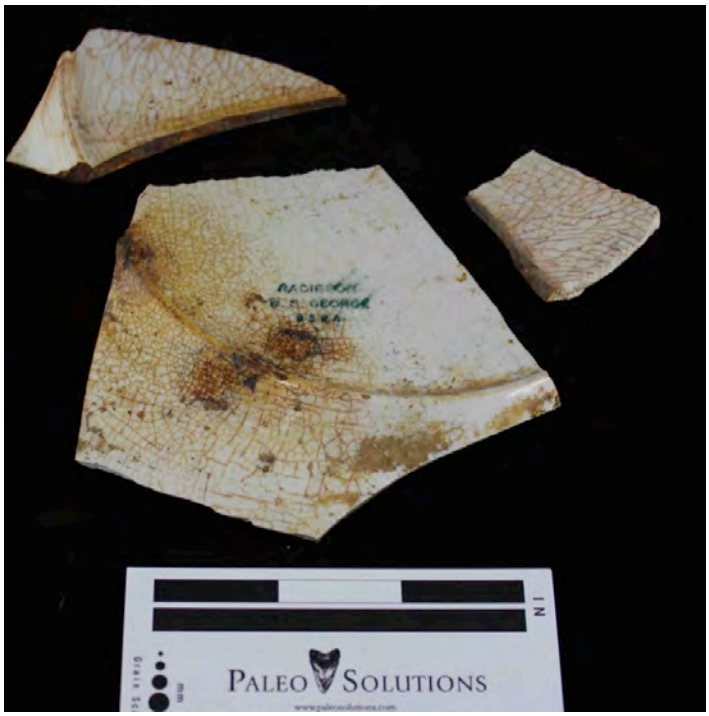
Mason jar lids manufactured by BOYD's and Hazel-Atlas Glass Company. 20150928DDS.01H. Artifact #68

Blue Canton Ware (AKA Blue Canton). 20150928DDS.01H. Artifact #69



Flow blue flatware. 20150928DDS.01H. Artifact #70

Fragmented Japanese bowl. 20150928DDS.01H. Artifact #71



Fragmented flatware manufactured by W.S. George Pottery Company. 20150928DDS.01H. Artifact #72

State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

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Trinomial

CONTINUATION SHEET

Property Name: City of Tustin
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Fragmented plate manufactured by Homer Knowles Pottery Company. 20150928DDS.01H. Artifact #73

Fragmented plate rim with hand painted floral design. 20150928DDS.01H. Artifact #74

State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

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Property Name: City of Tustin
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Brown porcelain insulator manufactured by The Porcelain Insulator Company. 20150929BCC.01H. Artifact #78

Glass bottle with "Edison Battery Oil Made In USA Thomas A. Edison Incorporated Bloomfield N.J. U.S.A." visible. 20150930JMP.01H. Artifact #80

State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

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CONTINUATION SHEET

Property Name: City of Tustin
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Possible mano. 20151001BCC.01P. Artifact #81

Glass bottle finish fragment with double ring (possible "picnic" style flask). 20151013BCC.01H. Artifact #82

State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

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Trinomial

CONTINUATION SHEET

Property Name: City of Tustin
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Military spoon with "U.S.N." and "NATIONAL Stainless" visible. 20151015BCC.01H. Artifact #84

Glass bottle fragment with machine made finish. 20151015BCC.01H. Artifact #85

State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

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Property Name: City of Tustin
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Brown porcelain insulators. 20151019BCC.01H. Artifact #86

State of California — Natural Resources Agency **Primary #**
Department of Parks and Recreation **Trinomial**

ARTIFACT RECORD

 Resource Name or #: TL-Lot19-01/H

Location Where Collected Specimens are Curated: The Dr. John D. Cooper Archaeological and Paleontological Center

Artifact #	Type	Condition	Description (form, material, etc.)	Dimensions (cm) L W TH	Locational Data (distance/bearing to datum)	Sketch/ Photo	Collected?
87	Historic	F	Glass bottle, curated	N/A	3729724mN, 424490mE	Yes	Yes
88	Historic	C	Glass bottle, curated	19 x 6.2	3729724mN, 424490mE	Yes	Yes
89	Historic	F	Glass bottle	N/A	3729724mN, 424490mE	Yes	Yes
90	Historic	F	Glass bottle base	N/A	3729724mN, 424490mE	Yes	Yes
91	Historic	F	Glass Finish (tip)	N/A	3729724mN, 424490mE	Yes	Yes
92	Historic	C	Medicine bottle, curated	14.5 x 2.3 x 4.6	3729724mN, 424490mE	Yes	Yes
93	Historic	F	Medicine bottle	N/A	3729724mN, 424490mE	no	Yes
94	Historic	C	Glass cosmetic bottle, curated	7.5 x 6.7	3729724mN, 424490mE	Yes	Yes
95	Historic	F	Glass serving bowl	N/A	3729724mN, 424490mE	Yes	Yes
96	Historic	F	Glass bottles	N/A	3729724mN, 424490mE	Yes	Yes
97	Historic	F	Flatware	N/A	3729724mN, 424490mE	Yes	Yes
98	Historic	F	Large mammal bone pieces	N/A	3729724mN, 424490mE	Yes	Yes
99	Historic	F	Leather boot pieces	N/A	3729724mN, 424490mE	no	Yes
19	Historic	C	Glass bottle	N/A	3729693mN, 424624mE	Yes	Yes
20	Historic	F	Medicine bottle neck and finish	N/A	3729701mN, 424492mE	No	Yes
22	Historic	F	Bottle base	N/A	3729740mN, 424470mE	Yes	Yes
23	Historic	F	Glass bottle base	N/A	3729740mN, 424470mE	Yes	Yes
24	Historic	F	Glass bottle base & side fragment	N/A	3729740mN, 424470mE	Yes	Yes
25	Historic	F	Glass bottle base	N/A	3729740mN, 424470mE	Yes	Yes
26	Historic	F	Glass bottle	N/A	3729740mN, 424470mE	Yes	Yes
27	Historic	C	Glass bottle – Chili powder, curated	8.5 x 2.9 x 3.5	3729740mN, 424470mE	Yes	Yes
28	Historic	F	Glass bottle neck and finish	N/A	3729740mN, 424470mE	no	Yes
29	Historic	C	Rail spike	N/A	3729740mN, 424470mE	Yes	Yes
30	N/A	F	Bone fragment and Complete bone	N/A	3729740mN, 424470mE	Yes	Yes
31	Historic	F	Glass bottle	N/A	3729740mN, 424470mE	No	Yes
32	Historic	F	Pot	N/A	3729740mN, 424470mE	No	Yes
33	Historic	F	Corroded wire	N/A	3729740mN, 424470mE	No	Yes
34	Historic	F	Glass bottle	N/A	3729691mN, 424470mE	No	Yes
36	Historic	C	Glass medicine bottle, curated	10.2 x 3.0	3729746mN, 424420mE	Yes	Yes
38	Historic	C	Glass milk bottle	N/A	3729651mN, 424395mE	Yes	Yes
39	Historic	C	Glass bottle	N/A	3729651mN, 424395mE	Yes	Yes
40	Historic	F	Glass bottle	N/A	3729651mN, 424395mE	No	Yes
41	Historic	F	Glass lid	N/A	3729651mN, 424395mE	Yes	Yes
42	Historic	F	Ceramic plate	N/A	3729651mN, 424395mE	Yes	Yes
43	Historic	F	Glass	N/A	3729651mN, 424395mE	No	Yes
44	Historic	F	Ceramic	N/A	3729651mN, 424395mE	Yes	Yes
45	N/A	F	Bone	N/A	3729651mN, 424395mE	Yes	Yes
46	Historic	C	Glass bottles, curated	18 x 6.8	3729640mN, 424341mE	Yes	Yes
47	Historic	C	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
49	Historic	C	Glass bottles, curated	12 x 5	3729640mN, 424341mE	Yes	Yes
50	Historic	C	Glass bottles, curated	5.4 x 4.1	3729640mN, 424341mE	Yes	Yes

State of California — Natural Resources Agency **Primary #**
Department of Parks and Recreation **Trinomial**

ARTIFACT RECORD

 Resource Name or #: TL-Lot19-01/H

Artifact #	Type	Condition	Description (form, material, etc.)	Dimensions (cm) L W TH	Locational Data (distance/bearing to datum)	Sketch/ Photo	Collected?
51	Historic	C	Glass bottles, curated	17 x 3 x 5	3729640mN, 424341mE	Yes	Yes
52	Historic	C	Glass bottles, curated	13 x 3.3 x 4.6	3729640mN, 424341mE	Yes	Yes
53	Historic	C	Glass bottles, curated	11.4 x 2.7 x 3.7	3729640mN, 424341mE	Yes	Yes
54	Historic	C	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
55	Historic	C	Glass bottles, curated	N/A	3729640mN, 424341mE	Yes	Yes
56	Historic	C	Glass bottles, curated	6.6 x 2.2	3729640mN, 424341mE	Yes	Yes
57	Historic	F	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
58	Historic	F	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
59	Historic	F	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
60	Historic	F	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
61	Historic	F	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
62	Historic	F	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
63	Historic	F	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
64	Historic	F	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
65	Historic	F	Glass bottles	N/A	3729640mN, 424341mE	Yes	Yes
66	Historic	C	Corroded metal bottle caps	N/A	3729640mN, 424341mE	Yes	Yes
67	Historic	F	5 nut/washer attachments, very corroded, purpose unknown	N/A	3729640mN, 424341mE	Yes	Yes
68	Historic	C	Mason jar inserts	N/A	3729640mN, 424341mE	Yes	Yes
69	Historic	F	Plate, curated	N/A	3729640mN, 424341mE	Yes	Yes
70	Historic	F	Plate, curated	N/A	3729640mN, 424341mE	Yes	Yes
71	Historic	F	Plate, curated	N/A	3729640mN, 424341mE	Yes	Yes
72	Historic	F	Plate	N/A	3729640mN, 424341mE	Yes	Yes
73	Historic	F	Plate	N/A	3729640mN, 424341mE	Yes	Yes
74	Historic	F	Plate	N/A	3729640mN, 424341mE	Yes	Yes
75	Historic	F	Plate	N/A	3729640mN, 424341mE	Yes	Yes
76	Historic	F	Plate	N/A	3729640mN, 424341mE	Yes	Yes
77	Historic	F	Terra cotta pot	N/A	3729640mN, 424341mE	Yes	Yes
78	Historic	F	Insulator, curated	8.4 x 8.1	3729614mN, 424310mE	Yes	Yes
80	Historic	C	Glass bottle, curated	N/A	3729572mN, 424290mE	Yes	Yes
81	Prehistoric	C	Mano, curated	N/A	3729607mN, 424144mE	Yes	Yes
82	Historic	F	Glass bottle finish	N/A	3729738mN, 424295mE	No	Yes
83	Historic	F	Ceramic Plate	N/A	3729738mN, 424295mE	Yes	Yes
84	Historic	C	Spoon, curated	N/A	3729837mN, 424160mE	Yes	Yes
85	Historic	F	Glass bottle finish	N/A	3729731mN, 424248mE	Yes	Yes
86	Historic	F	Procelain insulator	N/A	3729683mN, 424166mE	Yes	Yes

Type Key: (list abbreviations used)	**Condition Key:**
	F Fragmentary **C Complete** **Other:**

State of California C Natural Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#
SKETCH MAP
Trinomial

Page 37 **of** 38 ***Resource Name or #** (Assigned by recorder) TL-Lot19-01/H

Lot 19 Tustin Legacy (Tustin Air Base) Project
Artifact Location Map

- Site Boundary
- Historic artifact concentration
- Isolate
- Isolate (prehistoric)

N
0 50 100 Meters
0 100 200 Feet

PALEO SOLUTIONS
Paleontological and Archaeological Compliance and Consulting Services

Base layers from Esri ArcGIS Online Resource Center

***Drawn by:** Paleo Solutions Inc. ***Date of map:** 2/3/2016

DPR 523K (Rev. 1/1995)(Word 9/2013) NOTE: Include bar scale and north arrow.

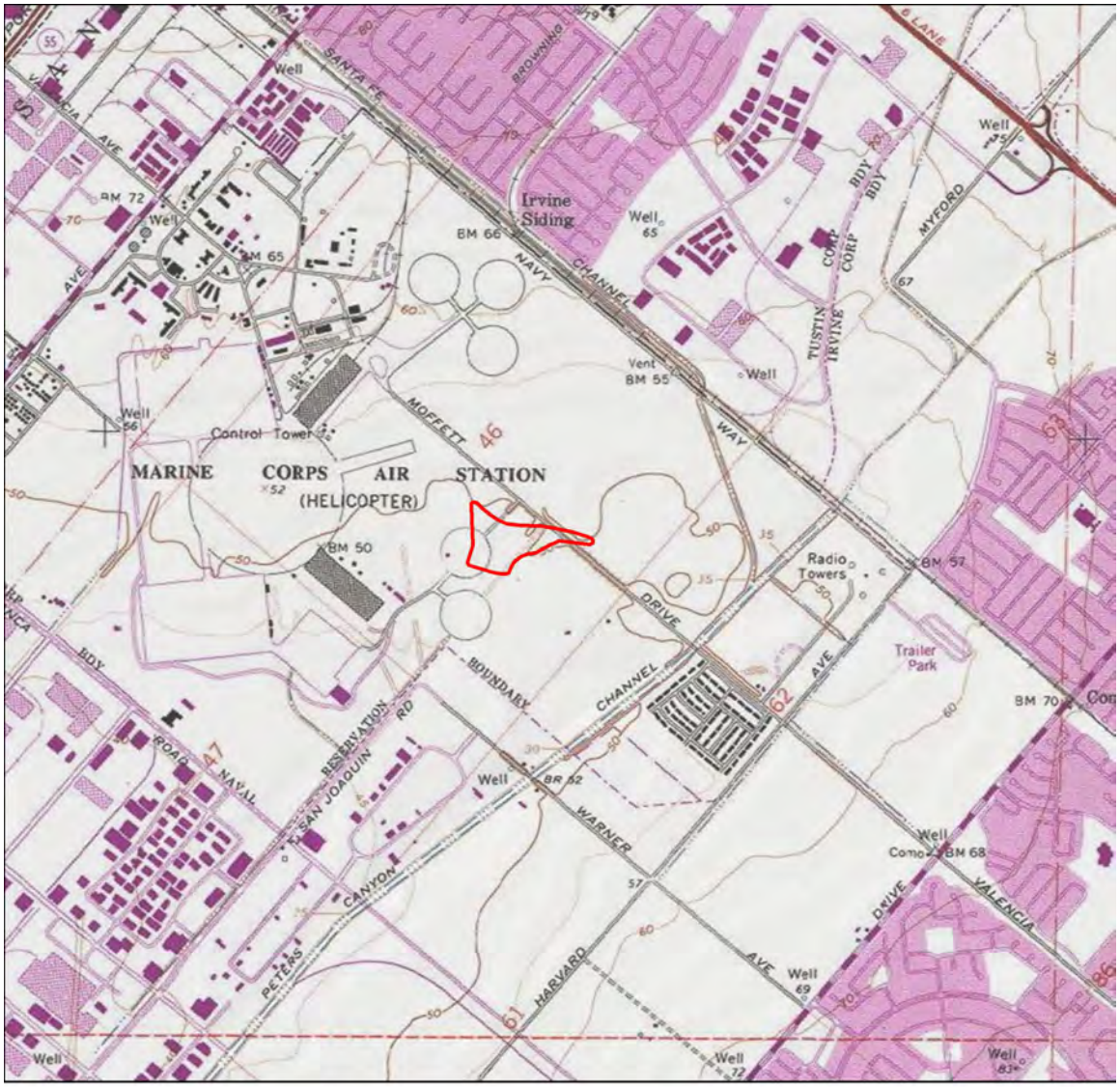
State of California C Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Page 38 **of** 38 ***Resource Name or #** (Assigned by recorder) TL-Lot19-01/H

***Map Name:** Tustin 7.5' Quadrangle ***Scale:** 1:24,000 ***Date of map:** 1965 photo revised 1972



Lot 19 Tustin Legacy (Tustin Air Base) Project
Location Map

Site Boundary

N

0 0.25 0.5 Miles

1:24,000

PALEO SOLUTIONS
Paleontological and Archaeological Compliance and Consulting Services

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

 *Resource Name or #: TL Isol-01

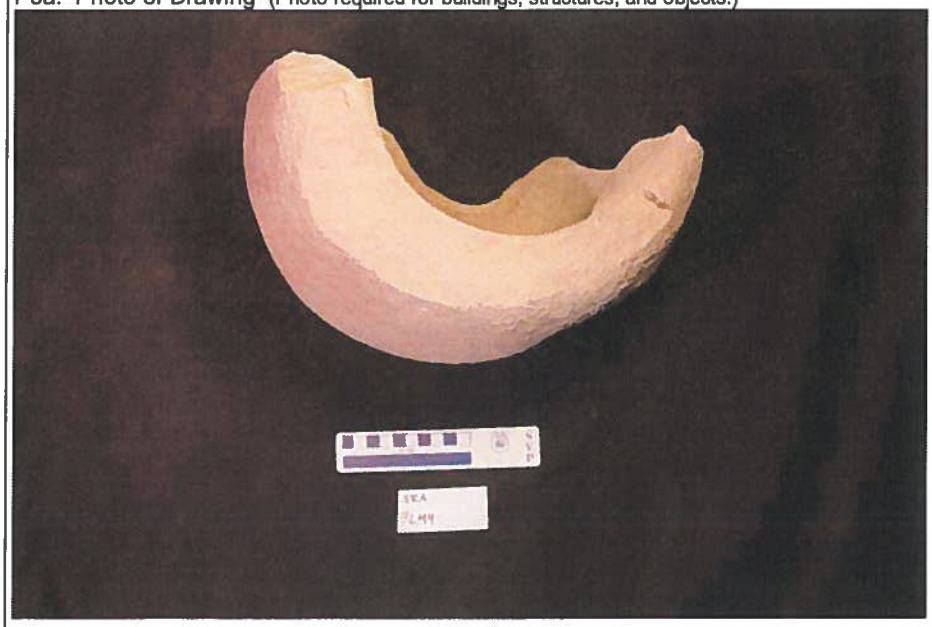
P1. Other Identifier: LM09
***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted** ***a. County:** Orange
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** Tustin **Date:** 1983 **T** 5S ; **R** 9W ; ¼ **of** ¼ **of Sec** 46 ; S.B. **B.M.**
c. Address: Irvine Center Dr. City: Tustin Zip: 92606
d. UTM: Zone: 11 ; 424989 mE/ 3729798 mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:
These UTMs were taken from a point plotted on a large scale map. They are approximate.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Isolate TL Isol-01 is a sandstonestone bowl fragment consisting of approximately 50% of the original item. The artifact is 29.6 cm x 23.1 cm x 16.6 cm. The diameter of the mouth of the bowl is 20 cm. The bowl is 20.5 cm deep and has a larger interior diameter than the dimension of its mouth. This artifact is part the the collection assigned Cooper Center Accession Number T-001-2013.

***P3b. Resource Attributes:** (List attributes and codes) AP16
***P4. Resources Present:** ☐Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ■Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Lab Photo. Accession # T-001-2013

***P6. Date Constructed/Age and Sources:** ☐Historic ■Prehistoric ☐Both

***P7. Owner and Address:**
City of Tustin
300 Centennial Way
Tustin, California 92780

***P8. Recorded by:** (Name, affiliation, and address)
Scott Armstrong
Paleo Solutions Inc.
911 S. Primrose, Unit J
Monrovia, CA 91016

***P9. Date Recorded:**
***P10. Survey Type:** (Describe)
Grading Monitoring

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")

Final Archaeological Monitoring Report for the Tustin Legacy Project, City of Tustion, Orange County, California, by Mark Deering, Joan Brown and William A. Sawyer. Paleo Solutions Inc., Monrovia, CA, March 2013.

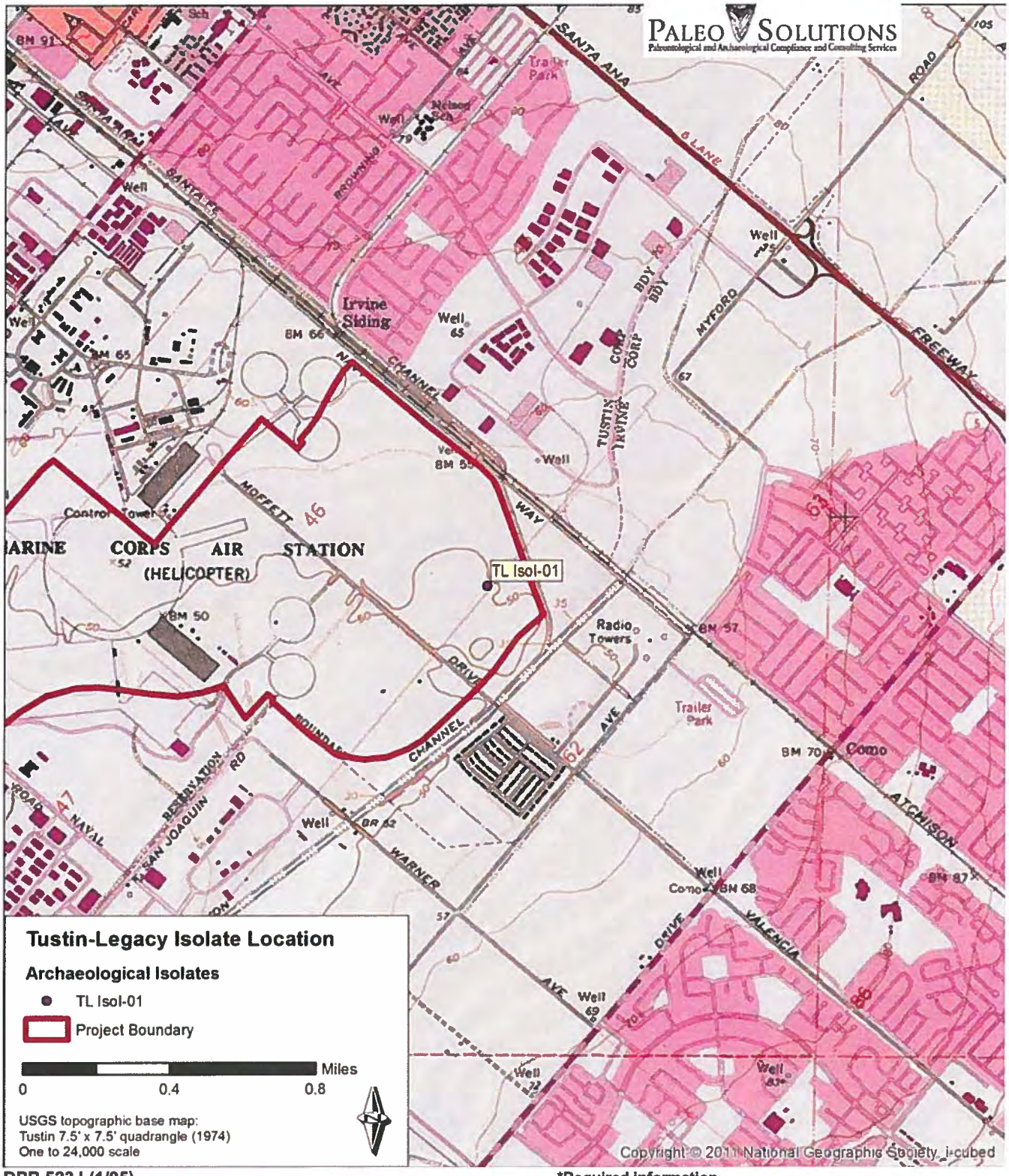
***Attachments:** ☐NONE ■Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 2 of 2 *Resource Name or #: TL Isol-01

*Map Name: Tustin quadrangle *Scale: 1 to 24,000 *Date of Map: 1974



DPR 523J (1/95)

*Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

 *Resource Name or #: TL Isol-07

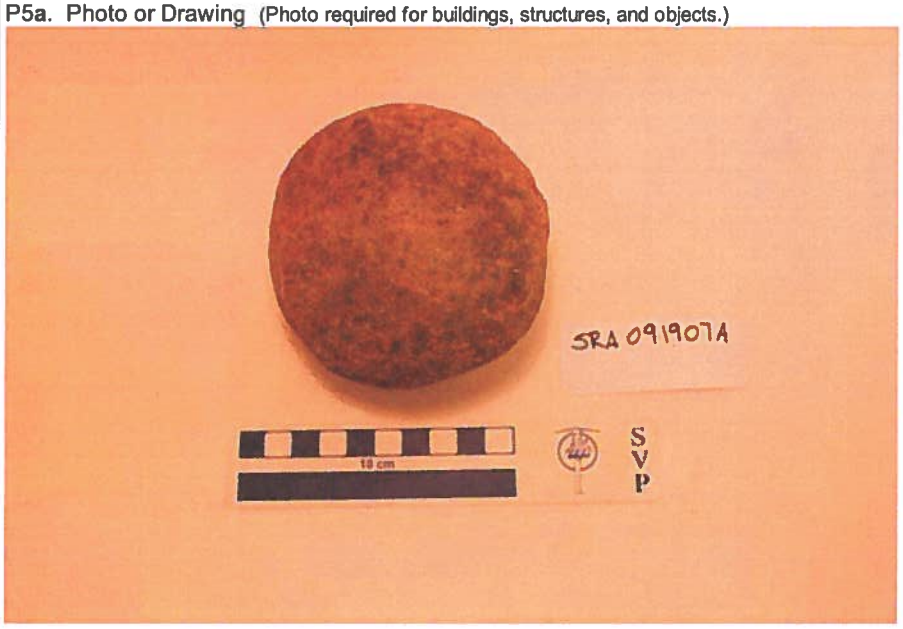
P1. Other Identifier: Field number 091907A
***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted** ***a. County:** Orange
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** Tustin **Date:** 1983 **T** 5S ; **R** 9W ; **¼ of** **¼ of Sec** 47 ; S.B. **B.M.**
c. Address: Irvine Center Dr. City: Tustin Zip: 92606
d. UTM: Zone: 11 ; 422539 mE/ 3729522 mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 45 ft AMSL

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Isolate TL Isol-07 is a complete bifacial mano of undetermined material type but closely resembles andesite. The hypothesis that it is granitic is unlikely for the area where the artifact was discovered. It measures 9.5 cm x 7.0 cm x 1.o cm and weighs 858.7 g. This artifact is part the the collection assigned Cooper Center Accession Number T-001-2013.

***P3b. Resource Attributes:** (List attributes and codes) AP16
***P4. Resources Present:** ☐Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ■Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Lab Photo. Accession # T-001-2013

***P6. Date Constructed/Age and Sources:** ☐Historic ■Prehistoric ☐Both

***P7. Owner and Address:**
City of Tustin
300 Centennial Way
Tustin, California 92780

***P8. Recorded by:** (Name, affiliation, and address)
Scott Armstrong
Paleo Solutions Inc.
911 S. Primrose, Unit J
Monrovia, CA 91016

***P9. Date Recorded:**
***P10. Survey Type:** (Describe)
Grading Monitoring

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")

Final Archaeological Monitoring Report for the Tustin Legacy Project, City of Tustion, Orange County, California, by Mark Deering, Joan Brown and William A. Sawyer. Paleo Solutions Inc., Monrovia, CA, March 2013.

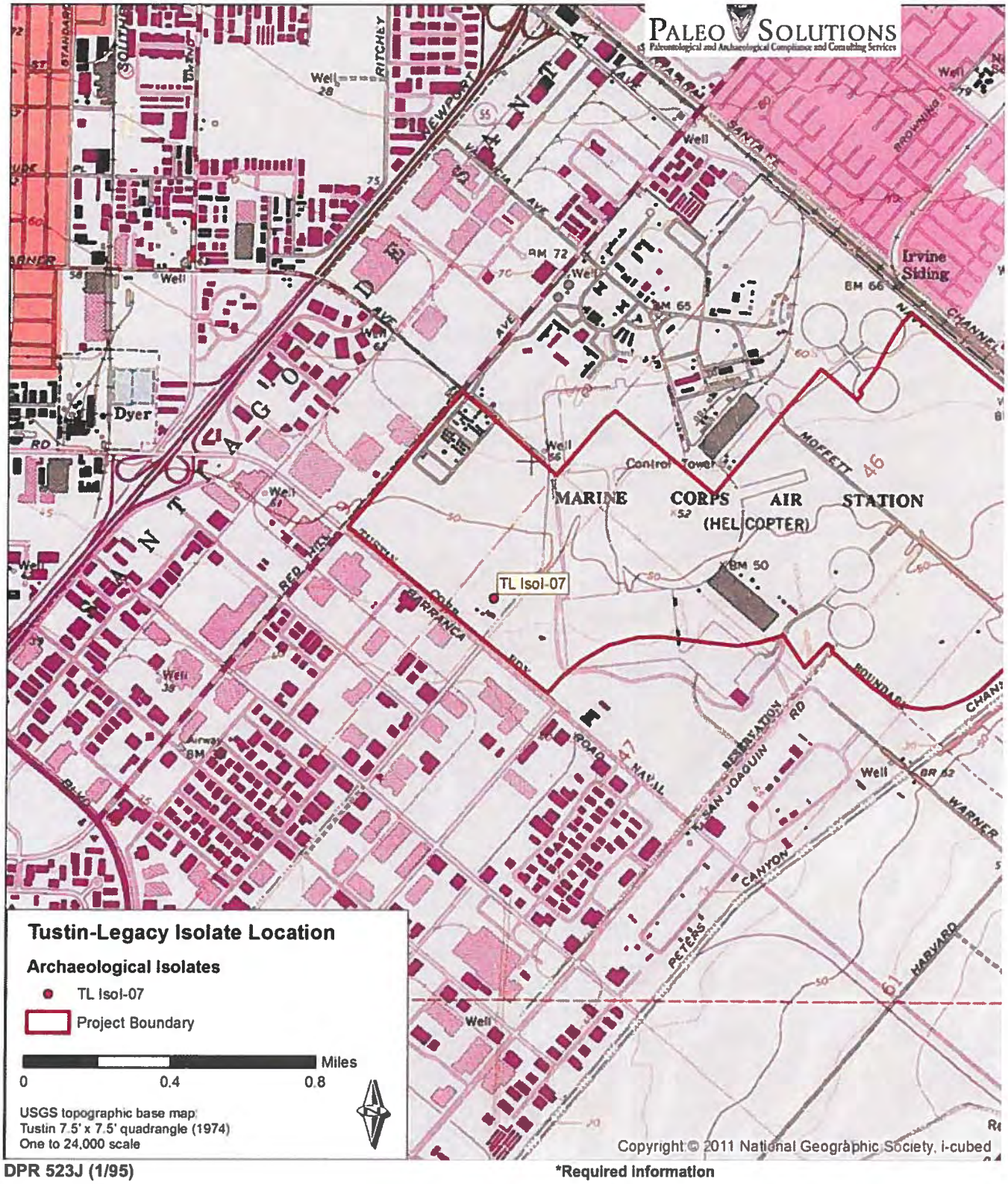
***Attachments:** ☐NONE ■Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 2 of 2 *Resource Name or #: TL Isol-07

*Map Name: Tustin quadrangle *Scale: 1 to 24,000 *Date of Map: 1974



DPR 523J (1/95) *Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

Page 1 of 2 *Resource Name or #: TL Isol-08

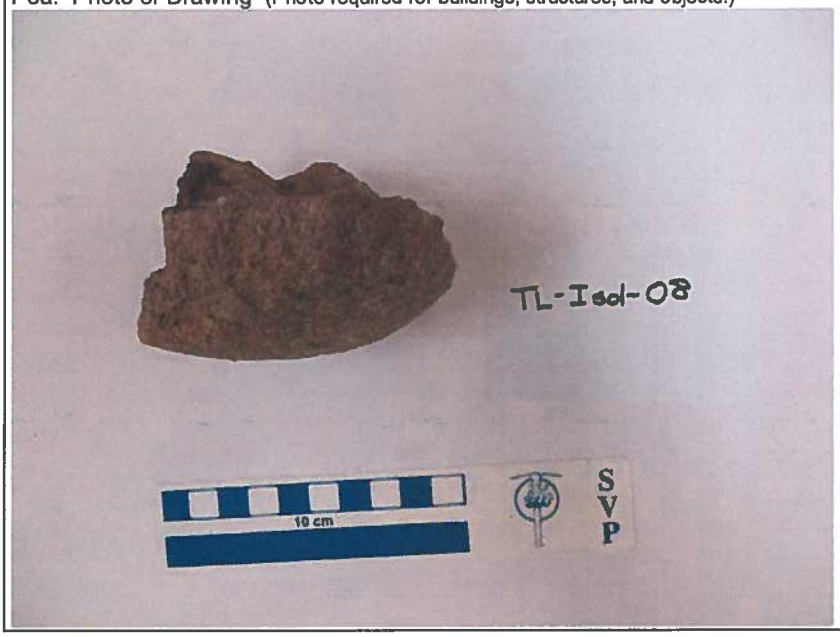
P1. Other Identifier: Field number 091907B
***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted** ***a. County:** Orange
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** Tustin **Date:** 1983 **T** 5S ; **R** 9W ; ¼ of ¼ of **Sec** 47 ; S.B. **B.M.**
c. Address: Irvine Center Dr. City: Tustin Zip: 92606
d. UTM: Zone: 11 ; 422539 mE/ 3729522 mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 45 ft AMSL

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Isolate TL Isol-08 is a bifacial mano fragment of andesitic material type, consisting of approximately 25% of its original size. It measures 9.4 cm x 6.0 cm x 6.1 cm and weighs 331.9 g. This artifact is part the the collection assigned Cooper Center Accession Number T-001-2013.

***P3b. Resource Attributes:** (List attributes and codes) AP16
***P4. Resources Present:** ☐Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ■Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Lab Photo. Accession # T-001-2013

***P6. Date Constructed/Age and Sources:** ☐Historic ■Prehistoric ☐Both

***P7. Owner and Address:**
City of Tustin
300 Centennial Way
Tustin, California 92780

***P8. Recorded by:** (Name, affiliation, and address)
Scott Armstrong
Paleo Solutions Inc.
911 S. Primrose, Unit J
Monrovia, CA 91016

***P9. Date Recorded:**
***P10. Survey Type:** (Describe)
Grading Monitoring

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")

Final Archaeological Monitoring Report for the Tustin Legacy Project, City of Tustion, Orange County, California, by Mark Deering, Joan Brown and William A. Sawyer. Paleo Solutions Inc., Monrovia, CA, March 2013.

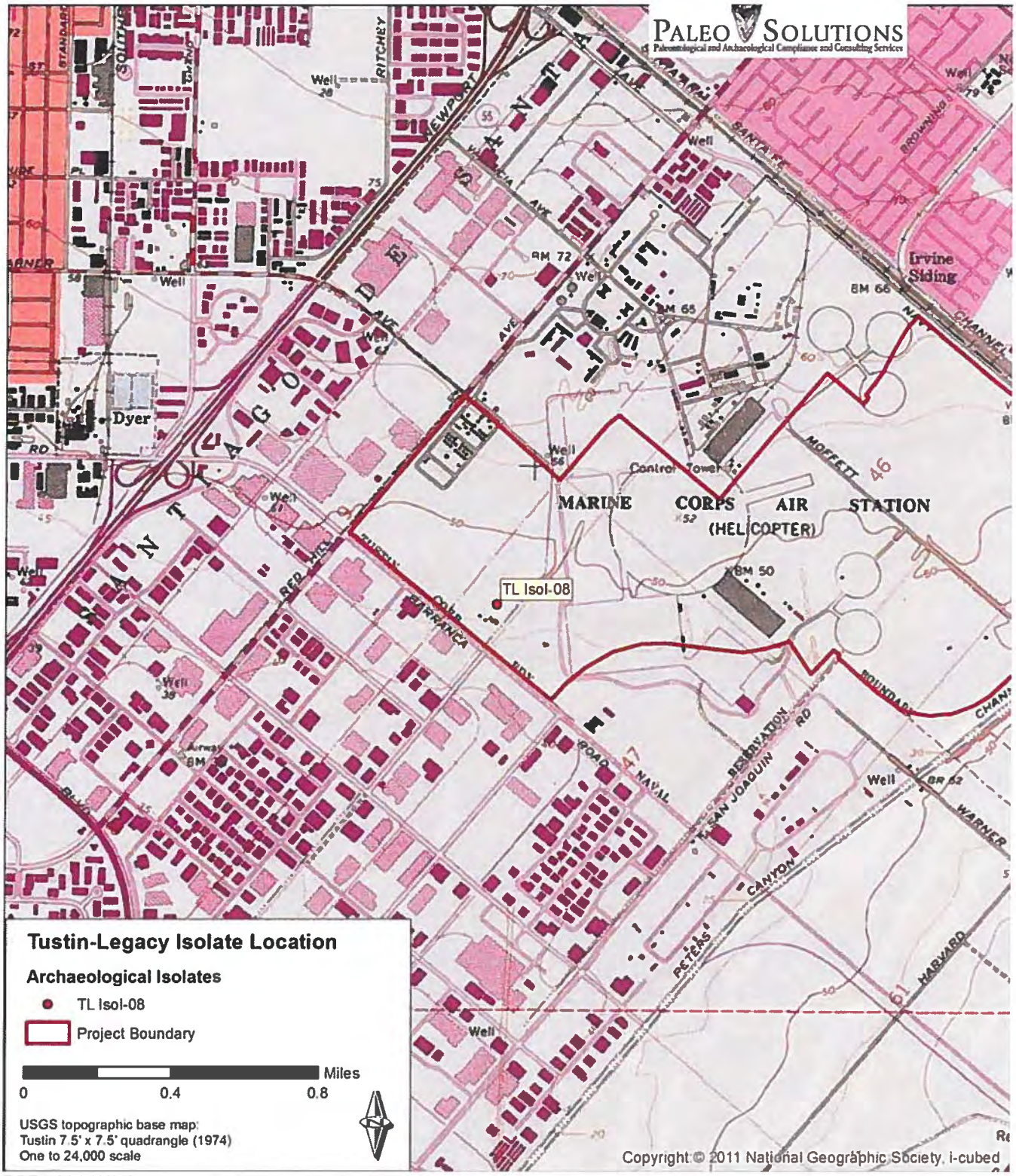
***Attachments:** ☐NONE ■Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 2 of 2 *Resource Name or #: TL Isol-08

*Map Name: Tustin quadrangle *Scale: 1 to 24,000 *Date of Map: 1974



DPR 523J (1/95) *Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

*Resource Name or #: TL Isol-15

P1. Other Identifier: 091511-01

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***a. County:** Orange

***b. USGS 7.5' Quad:** Tustin **Date:** 1983 **T** 5S ; **R** 9W ; ¼ **of** ¼ **of Sec** 46 ; S.B. **B.M.**

c. Address: Irvine Center Dr. City: Tustin Zip: 92606

d. UTM: Zone: 11 ; 423929 mE/ 3729467 mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: NA

This artifact was recovered from approximately 2 feet below surface with some fill overlying. The discovery was near Tustin Ranch Rd just north of the fence separating the project from the road.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This isolate is a granitic pestle. The artifact is broken lengthwise at just over 60% of its estimated original width. It measures 13.8 cm long x 7.3 cm x 6.0 cm and weighs 1172.2g. The artifact is very well-defined, almost cylindrical, has a smooth finish and rounded tips. One tip has a distinct shoulder that is lacking on the other tip. The tip with the shoulder shows no noticeable grinding near its center. This artifact is part the the collection assigned Cooper Center Accession Number T-001-2013.

***P3b. Resource Attributes:** (List attributes and codes) AP16

***P4. Resources Present:** ☐Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ■Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) Photo # MER09152011_4, Accession # T-001-2013

***P6. Date Constructed/Age and Sources:** ☐Historic ■Prehistoric ☐Both

***P7. Owner and Address:**
City of Tustin
300 Centennial Way
Tustin, California 92780

***P8. Recorded by:** (Name, affiliation, and address)
Maria Espinoza
Paleo Solutions Inc.
911 S. Primrose, Unit J
Monrovia, CA 91016

***P9. Date Recorded:** 9/15/2011

***P10. Survey Type:** (Describe)
Grading Monitoring

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")

Final Archaeological Monitoring Report for the Tustin Legacy Project, City of Tustion, Orange County, California, by Mark Deering, Joan Brown and William A. Sawyer. Paleo Solutions Inc., Monrovia, CA, March 2013.

***Attachments:** ☐NONE ■Location Map ☐Sketch Map ■Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

*Required Information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI#
Trinomial

Page 2 of 3 *Resource Name or # (Assigned by recorder) TL Isol-15

*Recorded by: Maria Espinoza *Date: 9/15/2011 ■ Continuation ☐ Update

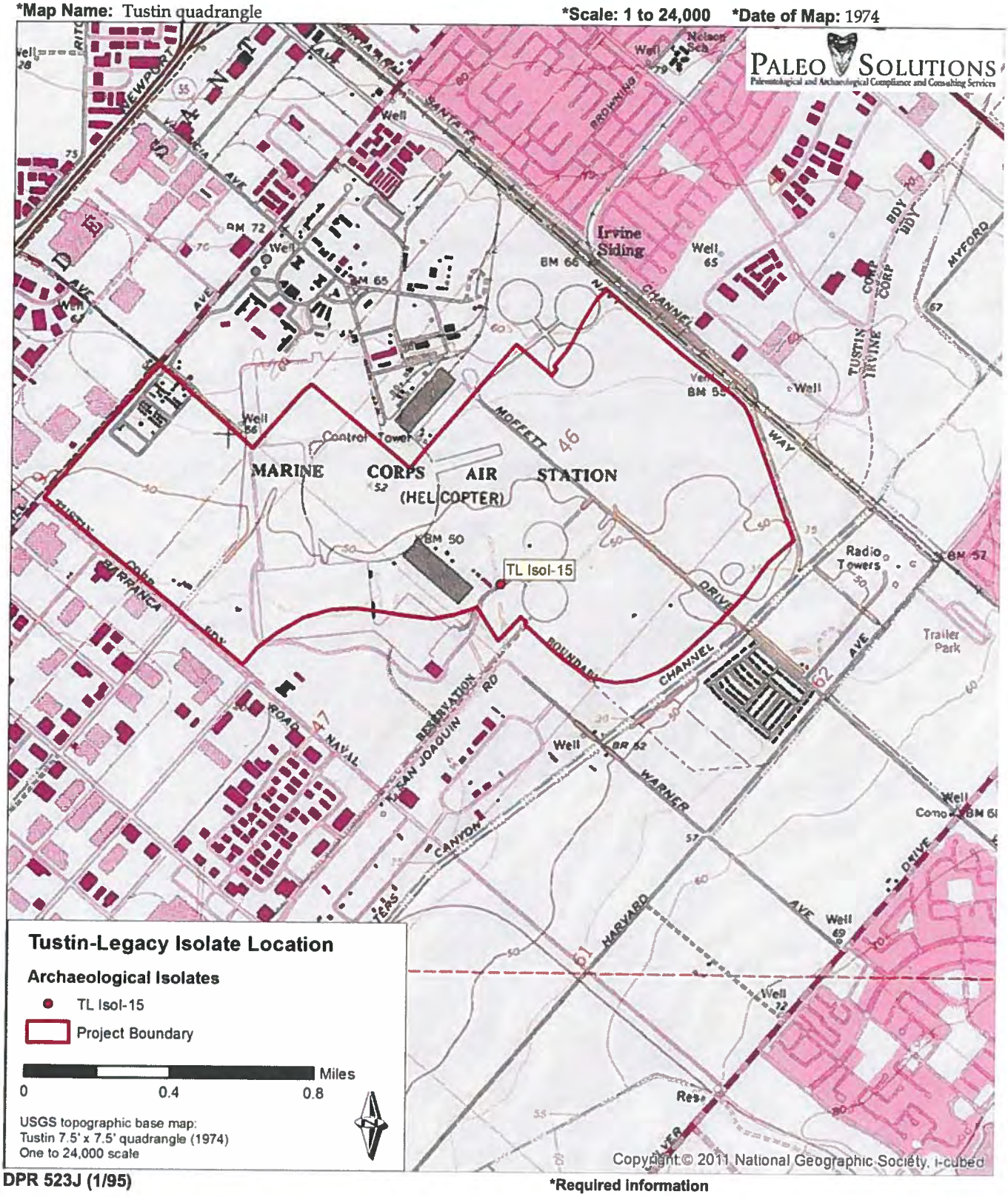
This photo shows the depth and soil context at the time of discovery for TL Isol-15 (091511-01). The photo is accessioned with Cooper Center Accession Number T-001-2013 as MER09152011_6.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 3 of 3 *Resource Name or #: TL Isol-015

*Map Name: Tustin quadrangle *Scale: 1 to 24,000 *Date of Map: 1974



DPR 523J (1/95)

*Required information

30-160312

Form 10-306
(Oct. 1972)

UNITED S[illegible] DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY – NOMINATION FORM
FOR FEDERAL PROPERTIES

(Type all entries - complete applicable sections)

STATE:	California
COUNTY:	Orange
FOR NPS USE ONLY	
ENTRY DATE	

1. NAME

COMMON: Lighter-than-Air Hangars, Marine Corps Air Station (Helicopter), Santa Ana, CA

AND/OR HISTORIC:

2. LOCATION

STREET AND NUMBER: Valencia and Redhill Avenue

CITY OR TOWN: Santa Ana

CONGRESSIONAL DISTRICT: 39th at present; 40th after 1Jan75

STATE: California — CODE:

COUNTY: Orange — CODE:

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☐ Building	☐ Public	Public Acquisition:	☒ Occupied	Yes:
☐ Site ☒ Structure	☒ Private	☐ In Process	☐ Unoccupied	☒ Restricted
☐ Object	☐ Both	☐ Being Considered	☐ Preservation work in progress	☐ Unrestricted
				☐ No

PRESENT USE (Check One or More as Appropriate)

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☐ Private Residence	☐ Other (Specify)	
☐ Educational	☒ Military	☐ Religious		
☐ Entertainment	☐ Museum	☐ Scientific		

4. AGENCY

Department of the Navy, U. S. Marine Corps

REGIONAL HEADQUARTERS: (If applicable) Marine Corps Air Station (Helicopter)

STREET AND NUMBER: Valencia and Redhill Avenue

CITY OR TOWN: Santa Ana

STATE: California — CODE:

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Western Real Estate Division

STREET AND NUMBER: Box 727

CITY OR TOWN: San Bruno

STATE: California — CODE:

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: No previous surveys

DATE OF SURVEY: ☐ Federal ☐ State ☐ County ☐ Local

DEPOSITORY FOR SURVEY RECORDS:

STREET AND NUMBER:

CITY OR TOWN: — STATE: — CODE:

SEE INSTRUCTIONS

STATE: California

COUNTY: Orange

FOR NPS USE ONLY
ENTRY NUMBER
DATE

00269

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☒ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☐ Altered	☒ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL *(if known)* PHYSICAL APPEARANCE

The airship hangars at Santa Ana are two of a series of hangars built in ten different locations throughout the United States. All locations used the same plans and began construction during the early years of World War II.

The hangars stand 189 feet high to the top of the wind indicator, and 178 feet to the top of the roof. The hangars are 1088 feet long and 297 feet wide, covering a total ground area of 298,188 square feet.

The hangars are constructed in three main sections. Two of the sections are identical supporting structures of concrete located at each end of the hangar. Each structure consists of two pillars, six huge doors, and a brace connecting the two pillars at the top. The pillars are used as "pockets" to house the hangar doors (3 in each pillar) when open. The brace is also used as a guide for opening and closing the doors.

The third section of the hangar is the wood-framed, 484,932 square foot, arched roof. The roof is supported by fifty-one individual wooden braces.

The hangars are in their original appearance and location, however, they were reroofed in late 1957.

SEE INSTRUCTIONS

30-160312

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

☐ Pre-Columbian	☐ 16th Century	☐ 18th Century	☒ 20th Century
☐ 15th Century	☐ 17th Century	☐ 19th Century	

SPECIFIC DATE(S) *(If Applicable and Known)* 1943-present

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

Aboriginal	☐ Education	☐ Political	☐ Urban Planning
☐ Prehistoric	☐ Engineering	☐ Religion/Philosophy	☐ Other *(Specify)*
☐ Historic	☐ Industry		_____
☐ Agriculture	☐ Invention	☐ Science	_____
☐ Architecture	☐ Landscape Architecture	☐ Sculpture	_____
☐ Art		☐ Social/Humanitarian	_____
☐ Commerce	☐ Literature		_____
☐ Communications	☒ Military	☐ Theater	_____
☐ Conservation	☐ Music	☐ Transportation	_____

STATEMENT OF SIGNIFICANCE

The airship hangars are among the largest wood supported structures in the world, rivaled only by the other hangars built from the same plans. They have long been considered a landmark in Orange County.

The hangars mark a significant period of American history, when the airships were an important part of the United States anti-submarine defense. Each hangar is capable of sheltering six airships, an entire squadron.

The hangars were completed in 1943 when the air station was Santa Ana Naval Lighter-Than-Air Base. Following World War II, the base was decommissioned. During the period 1949-1951 the hangars were used by private enterprise as a museum for aircraft and a storage area.

In 1951 the base was recommissioned and the hangars were used to house helicopter squadrons during the development of the vertical assault. The hangars are still used to house helicopters in the now reclassified Marine Corps Air Station (Helicopter), Santa Ana.

SEE INSTRUCTIONS

30-160312

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Blueprints of original construction.

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY						OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES					
CORNER	LATITUDE			LONGITUDE				LATITUDE			LONGITUDE	
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	33 °	42 '	21 "	117 °	49 '	35 "		°	'	"	°	'	"
NE	°	'	"	°	'	"							
SE	°	'	"	°	'	"							
SW	°	'	"	°	'	"							

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: 14 acres (7 acres per hangar)

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE

11. FORM PREPARED BY

NAME AND TITLE: R. A. KUCI, Colonel, Commanding Officer

DATE: 1 October 1974

BUSINESS ADDRESS: Headquarters, Marine Corps Air Station (Helicopter)

STREET AND NUMBER: Valencia and Redhill Avenue

PHONE: 544-2400 Ext. 301

CITY OR TOWN: Santa Ana

STATE: California

CODE:

12. CERTIFICATION OF NOMINATION

State Liaison Officer recommendation:

☐ Yes
☐ No
☐ None

State Liaison Officer Signature

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Liaison Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The recommended level of significance is ☐ National ☐ State ☐ Local

Federal Representative Signature *Date*

Title

NATIONAL REGISTER VERIFICATION

I hereby certify that this property is included in the National Register.

Director, Office of Archeology and Historic Preservation

Date

ATTEST:

Keeper of The National Register

Date

SEE INSTRUCTIONS

GPO 938-449

30-160312
Lighter-than-Air Ship Hangars
Valencia and Redhill Aves.
NR 75000451
30-160312
Tustin Quad
MAR
STATION
Control Tower
Irvine Siding
Dyer
Well
BM 105
BM 91
BM 72
BM 65
BM 66
BM 55
BM 50
Vent
Trailer Park
Nelson Sch.
St Cecilias Sch
Beswick Sch
San Juan Sch
PACIFIC
NEWPORT
SANTA ANA
FREEWAY
RITCHEY
VALENCIA AVE
REDHILL AVE
TUSTIN
MOFFETT
NAVY
CHANNEL
BOUNDARY
RESERVATION RD
SAN JOAQUIN
WARNER
CANYON
HARVARD
PETERS
CULVER
SANTA FE
BROWNING
MITCHELL
WALNUT
CARFAX AVE
MYRTLE
Airway
Res

30-176837

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI#
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code _____ Reviewer _____ Date _____

Page P1 of P6 ***Resource Name or #: (Assigned by recorder)** Tustin USAR Center

P1. Other Identifier: Facility ID No. CA071

***P2. Location:** ☒ Not for Publication ☐ Unrestricted ***a. County** Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Tustin **Date** 1965, PR 1981 **T** 5S **R** 9W; Unsectioned area.

c. Address 2345 Barranca Parkway **City** Irvine **Zip** 92606

d. UTM: (Give more than one for large and/or linear resources) **Zone** ____ ; _____ **mE/** _____ **mN**

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
Drive on CA-241 S toward Irvine. CA-261 S becomes Jamboree Road. Turn right onto Barranca Parkway and end at 2345 Barranca Parkway.

***P3a. Description:** (Describe resource and its major elements. Include design, materials condition, alterations, size, setting and boundaries)
This facility consists of two buildings; a 1963 reserve center and a 1974 mechanic shop. Landscaping surrounding the facility includes lawn, foundation shrubs, palms and mature trees. Wrought iron fencing and concrete walls are also present. (continued)

***P3b. Resource Attributes: (List attributes and codes)** HP34. Military Property

***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures and objects.)

P5b. Description of Photo: (View, date, accession #) View west, Main entrance, 2/15/2006, Accession # OCo-TS-05-5037-001.jpg

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐Prehistoric ☐ Both
1963, 1974

***P7. Owner and Address:**
U.S. Army Reserve
63D Regional Readiness Command
4235 Yorktown Avenue
Los Alamitos, CA 90720-5002

***P8. Recorded by: (Name, affiliation and address)**
PAR Environmental Services, Inc
P.O. Box 160756, Sacramento, CA

***P9. Date Recorded:** 2/15/2006

***P10. Survey Type: (Describe)**
Cultural Resource Inventory

***P11. Report Citation: (Cite survey report and other sources, or enter "None")**
Cultural Resource Inventory and Evaluation of United States Army Reserve 63D Regional Readiness Command Facilities. 2006. PAR Environmental Services, Inc., Sacramento, CA.

***Attachments:** ☐NONE ☒ Location Map ☒ Sketch Map ☒ Continuation Sheet ☒ Building, Structure and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List)

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page P2 of P6 *Resource Name or #: (Assigned by recorder) Tustin USAR Center
*Recorded by: PAR Environmental Services, Inc. *Date 2-15-06 ☒Continuation ☐Update

P3. continued

Reserve Center

The Tustin USAR Center was designed in 1960 by Faxon Gruys & Sayler Architects and Engineers in Los Angeles, an architectural firm under contract to the Department of the Army. It was built in 1963. The reserve center is an irregularly shaped concrete block building with a brick veneer. Roof heights are staggered with at least four different levels, both flat and slightly pitched. All appear to have composite roofing finishes and closed or boxed eaves. The building is constructed on a concrete slab foundation. The main entry is on the southwest façade facing Barranca Parkway, although the most commonly used entrance is on the southeast side, facing a private parking lot. There is also a rear entrance on the northeast side of the building near the mechanic's shop. The main mass of the building is two stories high, while there are one-story sections on the northwest side of the building.

The southwest façade facing Barranca Parkway has a central walkway with a flagpole. This entrance is outside of the fenced area, which explains why this has become the secondary entrance, although designed as the primary entrance. Fenestration is identical throughout the building and consists of metal sash windows. Each bank of windows has of two columns of three panes. The middle pane of each is an awning window, while the others above and below it are fixed. Across the southwest façade, there are five sets across the top story and six on the ground floor. The west side of the main structure has symmetrical fenestration with four sets of windows across the top floor and another four on the ground floor. There are also metal louvered vents above both rows of windows. The northwest side of the building has windows only on the one-story sections. The southeast façade (now the primary entrance) is broken into three sections: the main massing section on the south end, the entrance section in the center, and the one-story section on the northern end. Fenestration on the south end is identical to that on the southwest façade. In the central portion, there are windows only on the bottom floor. The main entrance consists of double metal doors flanked by one set of windows to the left and three sets of windows to the right of the opening. There is a dedication seal to the right of the door. The one-story section on the northern end has no doors or windows. The rear entrance on the northeast side of the building consists of a set of metal double doors with vertical glass windows.

Organizational Maintenance Shop (OMS)

The maintenance shop at the rear of the facility is modern, constructed in 1974. It consists of a concrete block, brick veneered structure on a concrete slab foundation with a flat composite roof. Eaves are boxed and the main entry is on the southwest side of the building. The building has six metal roll-up doors, one for each bay in the garage. There are windows on the north side of the building and pedestrian doors on the east and west sides of the structure. There is also a lower section on the northeast side of this building that may be an addition, although it is also finished in brick veneer. This building has windows on the north and northeast sides that consist of two-over-three awning lights.

30-176837

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page P3 of P6 *Resource Name or #: (Assigned by recorder) Tustin USAR Center
*Recorded by: PAR Environmental Services, Inc. *Date 2-15-06 ☒Continuation ☐Update

P5.

View east of south elevation, 2/15/2006, OCo-TS-05-5037-011.jpg

View east of west elevation, 2/15/2006, OCo-TS-05-5037-010.jpg

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page P4 of P6 *Resource Name or #: (Assigned by recorder) Tustin USAR Center
*Recorded by: PAR Environmental Services, Inc. *Date 2-15-06 ☒Continuation ☐Update

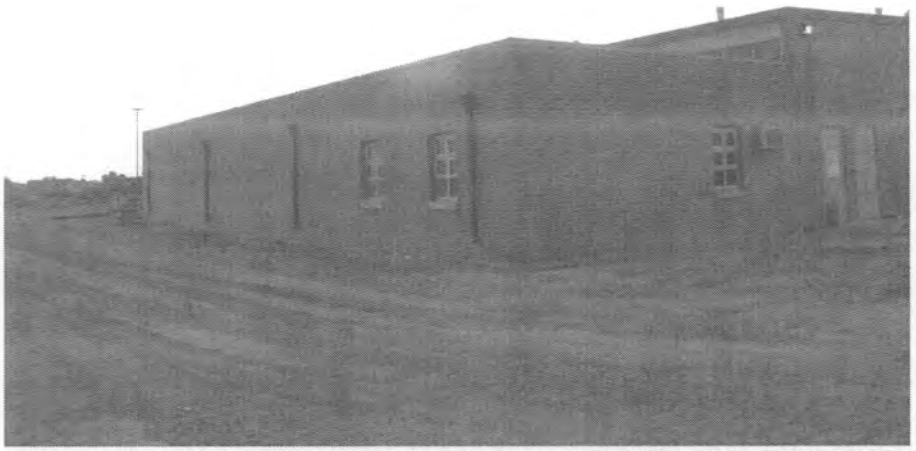
View south of west elevation, 2/15/2006, OCo-TS-05-5037-009.jpg

View northwest of south elevation of maintenance shop, 2/15/2006, OCo-TS-05-5037-005.jpg

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page P5 of P6 *Resource Name or #: (Assigned by recorder) Tustin USAR Center
*Recorded by: PAR Environmental Services, Inc. *Date 2-15-06 ☒Continuation ☐Update



View southeast of north elevation of maintenance shop, 2/15/2006, OCo-TS-05-5037-007.jpg

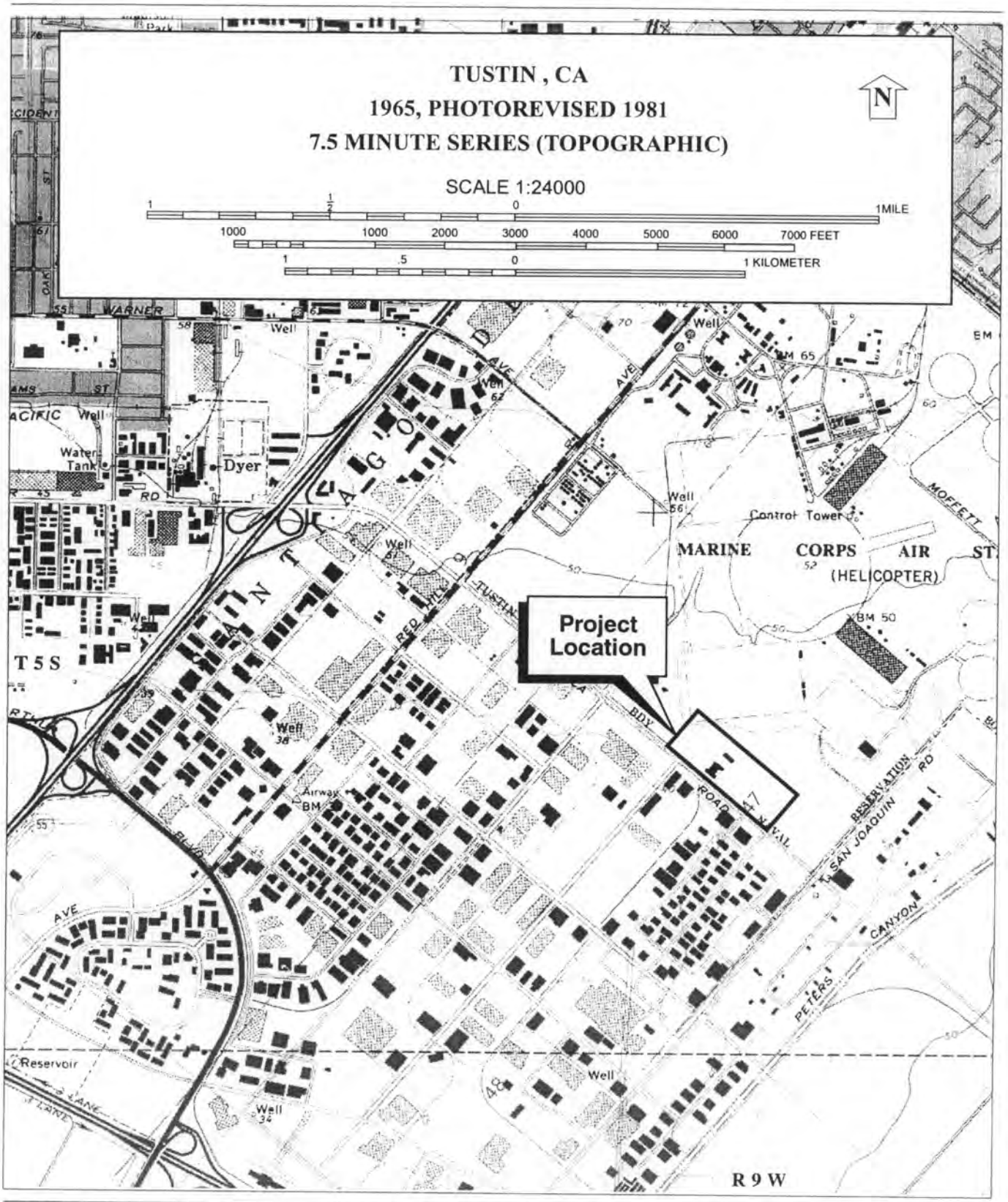
30-176837

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page P6 of P6 * Resource Name or # (Assigned by recorder) Tustin USAR Center
*Map Name: Tustin, Ca *Scale 1:24,000 * Date of map: 1965, Photorevised 1981



DPR 523K (1/95)

* Required Information

30-176837

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6Z

Page B1 of B2 *Resource Name or #: (Assigned by recorder) Tustin USAR Center

B1. Historic Name: Tustin USAR Center

B2. Common Name: Tustin USAR Center, Facility ID No. CA071

B3. Original Use: Military B4. Present Use: Military

*B5. Architectural Style: Military contemporary vernacular

*B6. Construction History: (Construction date, alterations, and date of alterations)

This Army Reserve facility was established in 1963. The mechanic shop at the rear was constructed in 1974.

*B7. Moved? ☒No ☐Yes ☐Unknown Date: _____ Original Location: _____

*B8. Related Features: None.

B9a. Architect: Faxon Gruys & Sayler, Architects, Los Angeles b.Builder Directorate of Facilities Engineering, Fort MacArthur

*B10. Significance: Theme Military Area Orange County

Period of Significance N/A Property Type Military Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity).

These buildings were constructed in 1963 (center) and 1974 (OMS) by the US Army Corps of Engineers (USACE) as a training and administrative facility. The main structure is the USAR Center building, supported by the OMS building behind it.

Army Reserve facilities throughout the United States were constructed as part of a building project following World War II. In the late 1940s, the design firm of Reisner & Urbahn was contracted to work together with the Army Reserve and the USACE to create standardized expandable plans for Reserve training centers and their vehicle maintenance shops known as OMS and AMSA. These plans were utilized by the USACE as sites were selected for construction of new facilities. At that point, the USACE would present the appropriate plan to a local contractor to build the Reserve Center and/or appropriate shop buildings. By the mid-1950s, the Reisner & Urbahn plans were being further modified by other architects (such as Faxon, Gruys & Sayler) hired by the USACE in building more sites. This trend continued thereafter, with design elements drifting farther from the original architectural style in order to stay current with changing building styles in the communities in which the facilities were being constructed.

The buildings at this site reflect a common construction style, using contemporary elements ubiquitous to both educational and military installations throughout the United States from this period, including simple, undecorated elevations, flat or slightly gabled roofed with boxed eaves, and utilitarian styling. They are only slightly reflective of the Reisner & Urbahn designs from this period. They are greatly altered adaptations by Faxon, Gruys & Sayler and they are not important or unique representations of Reisner & Urbahn's original work. Although they are military facilities constructed during the Cold War era, they are not associated with significant defense elements, such as nuclear, missile, or air defense sites, which have been found to reflect the critical, significant importance of that era to American history.

These buildings are not related to a significant period, event, or person in national, state or local history, nor do they represent the work of a master builder or craftsman. In addition, extensive modifications, additions and renovations have compromised the original integrity of setting, design, materials and workmanship. As a result, these structures do not appear to be eligible for inclusion in the National Register of Historic Places, nor do they appear to be historic resources for the purposes of NEPA or CEQA.

B11. Additional Resource Attributes: (List attributes and codes) N/A

*B12. References: None

B13. Remarks: None

(Sketch Map with north arrow required.)
See Attached Facility Map

*B14. Evaluator: PAR Environmental Services, Inc.
Sacramento, California
Date of Evaluation: March 15, 2006

(This space reserved for official comments.)

30-176837

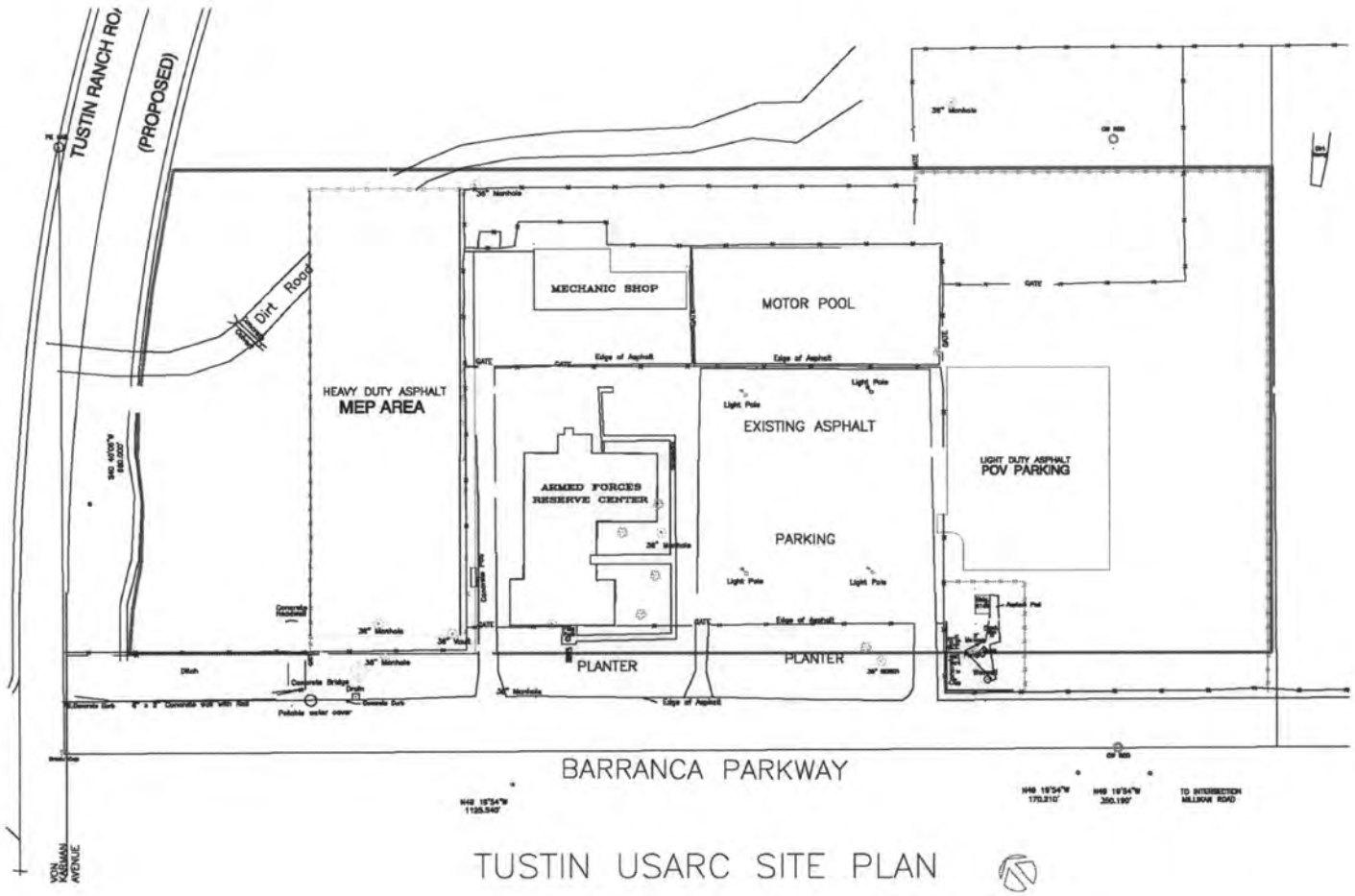
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____
HRI# _____

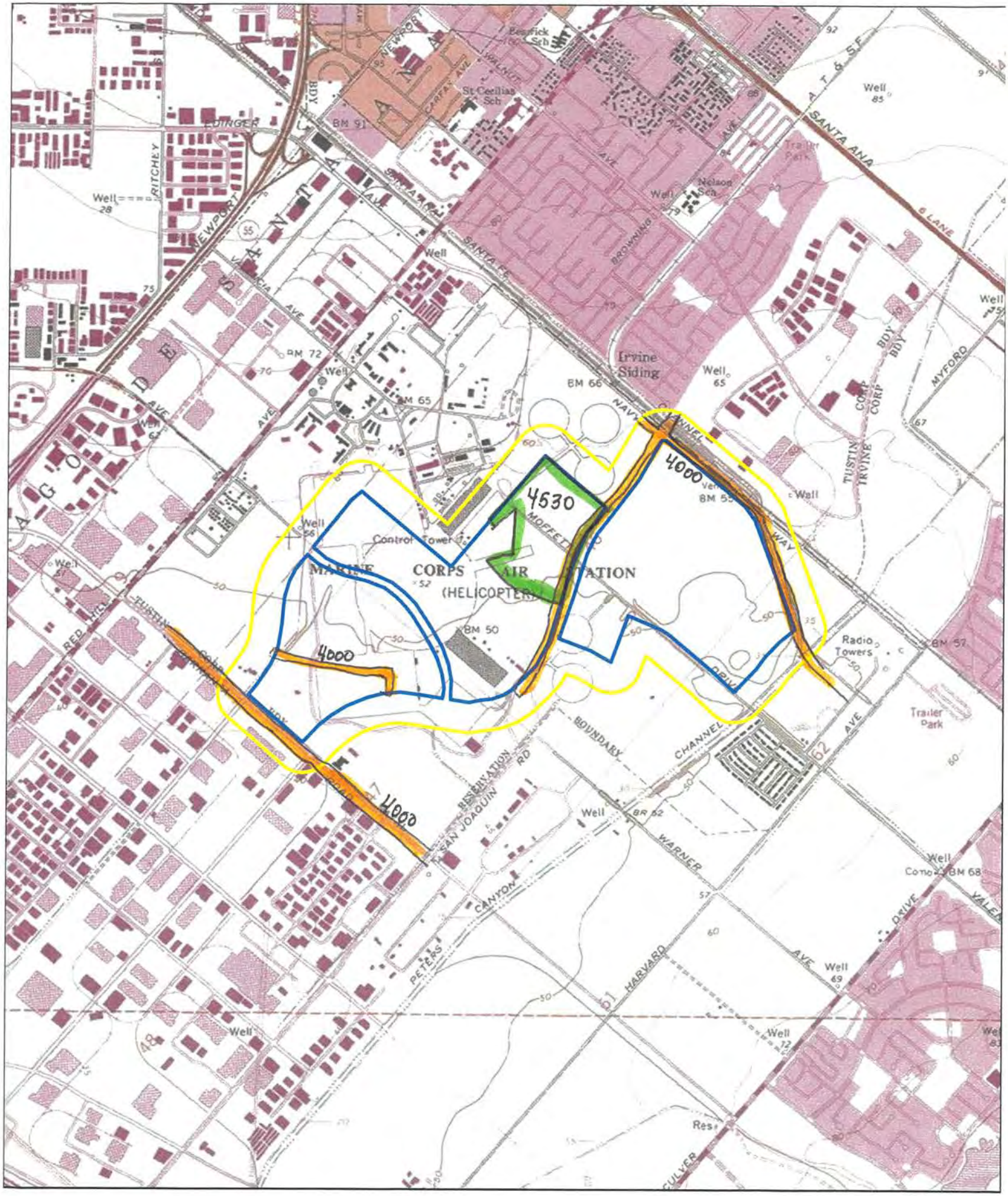
Page B2 **of** B2

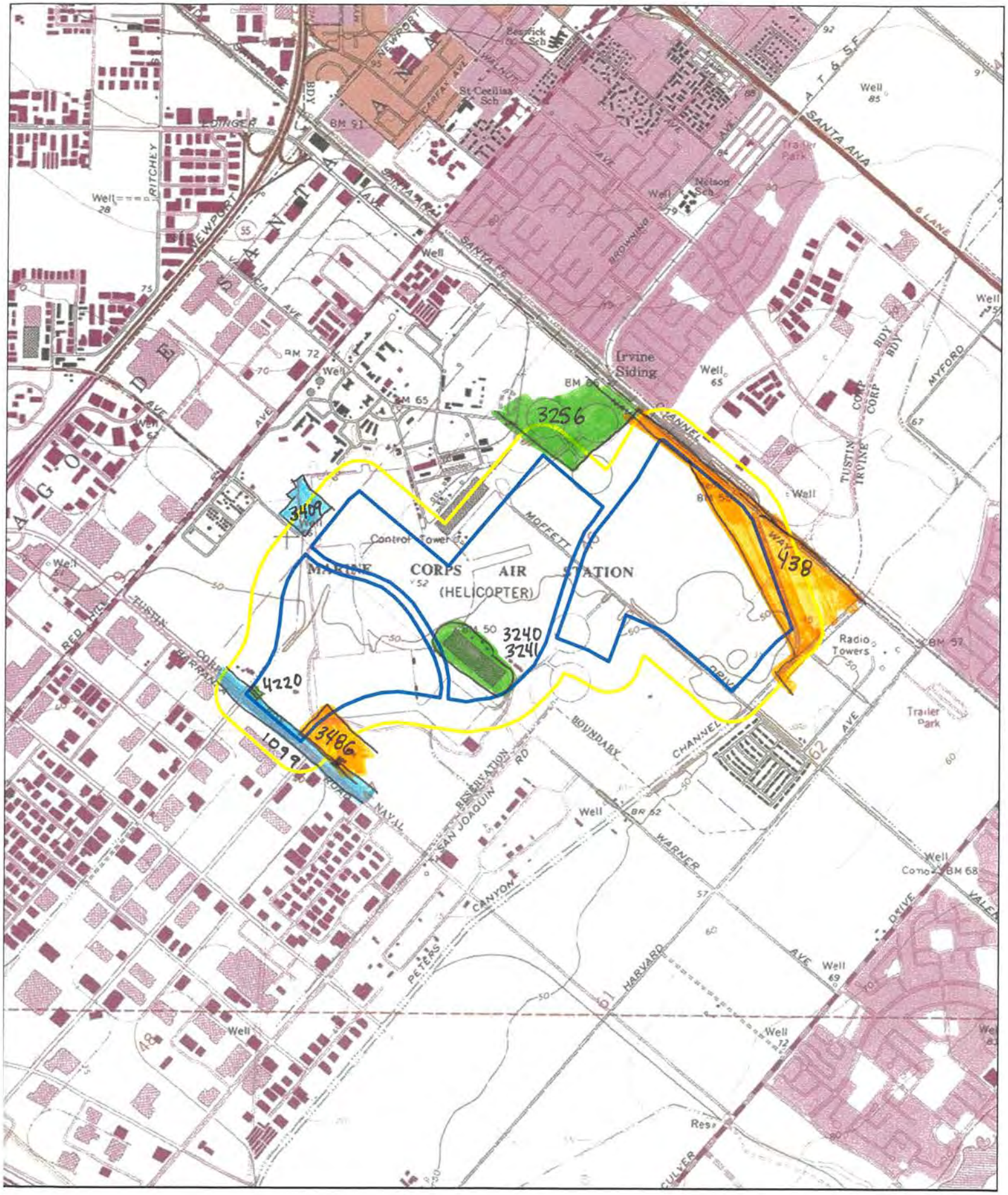
***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by recorder) Tustin USAR Center



TUSTIN USARC SITE PLAN


4530
4000
4000
4000
MARINE CORPS AIR STATION
(HELICOPTER)
Control Tower
Irvine Siding
Radio Towers
Trailer Park
Nelson Sch
St Cecilias Sch
Beckman Sch
Well
BM 50
BM 55
BM 57
BM 65
BM 66
BM 68
BM 72
SANTA ANA
NEWPORT
HARVARD
WARNER
JEAN JOAQUIN
PETERS CANYON
MOFFETT
MYFORD
TUSTIN IRVINE
CHANNEL
BOUNDARY
RESERVATION RD
Project
500 Ft Buffer
Tustin Legacy Specific Plan Amendment Project
USGS *Tustin* Quadrangle
(7.5-minute series)
N
Reports
1:24,000
1 OF 4
ETS BFSAES: 8/18/2023

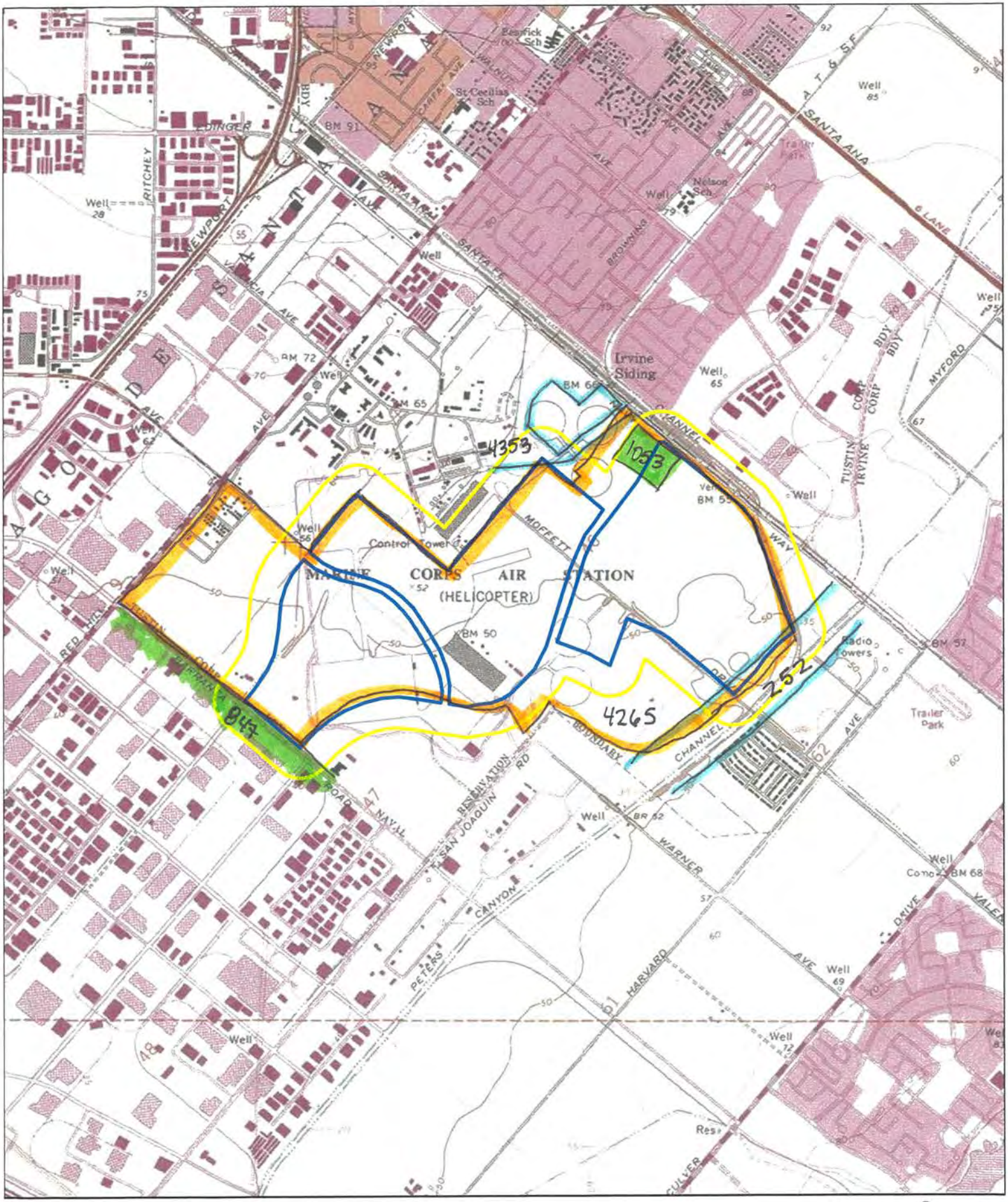


Tustin Legacy Specific Plan Amendment Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

Reports
1:24,000
2 of 4

ETS BFSAES: 8/18/2023



Project

500 Ft Buffer

Tustin Legacy Specific Plan Amendment Project
USGS *Tustin* Quadrangle
(7.5-minute series)

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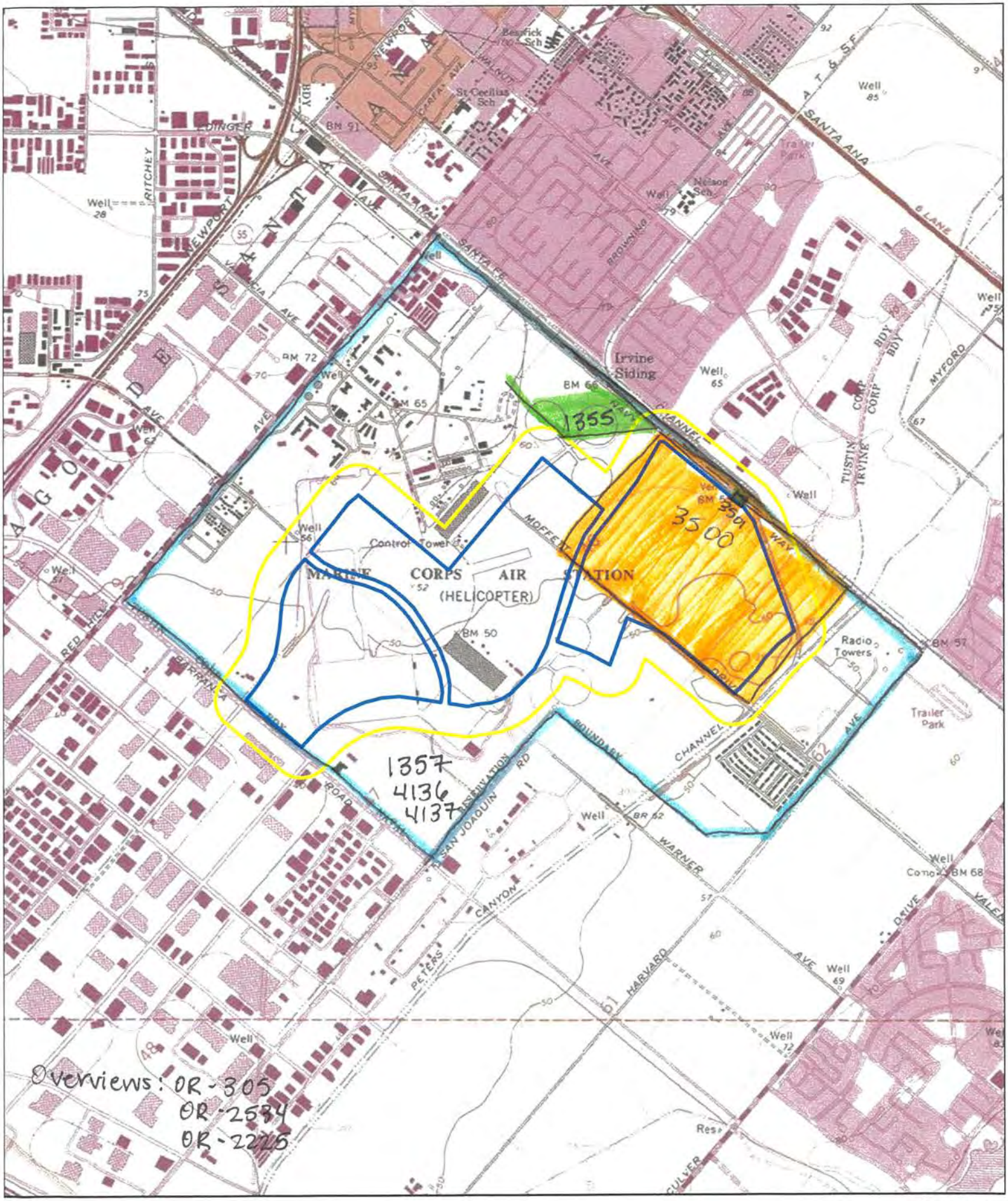
Reports
1:24,000
3 of 4

ETS BFSAES: 8/18/2023



Project

500 Ft Buffer

Tustin Legacy Specific Plan Amendment Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

Reports
1:24,000
4 of 4

ETS BFSAES: 8/18/2023

Report List

Tustin Legacy

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00252		1978	Desautels, Roger J.	Cultural Resources Report- Peliminary Assessment on the Proposed San Diego Creek Watershed Erosion and Sedimentary Control System in Hicks Canyon, Hicks Canyon Wash, Rattlesnake Creek Wash, San Diego Creek, and the San Joaquin Marsh Located in Orange Coun	Scientific Resource Surveys, Inc.	30-000115, 30-000116, 30-000121, 30-000195, 30-000196, 30-000197, 30-000284, 30-000478, 30-000511, 30-000513, 30-000719
OR-00305		1979	Schroth, Adella	The History of Archaeological Research on Irvine Ranch Property: the Evolution of a Company Tradition	Archaeological Resource Management Corp.	30-000002, 30-000044, 30-000047, 30-000048, 30-000051, 30-000053, 30-000059, 30-000060, 30-000061, 30-000062, 30-000063, 30-000064, 30-000065, 30-000066, 30-000067, 30-000068, 30-000069, 30-000070, 30-000071, 30-000072, 30-000073, 30-000077, 30-000091, 30-000099, 30-000100, 30-000104, 30-000106, 30-000107, 30-000109, 30-000111
OR-00438		1979	Mabry, Theo N.	Historic Property Survey Moulton Parkway/Irvine Center Drive Cities of Tustin and Irvine	Archaeological Planning Collaborative	
OR-00847		1985	Padon, Beth	Archaeological Resource Inventory City of Irvine and its Sphere of Influence	LSA Associates, Inc.	30-000161, 30-000349, 30-000361, 30-000383, 30-000478, 30-000494, 30-000495, 30-000496, 30-000499, 30-000545, 30-000601, 30-000734, 30-000735, 30-000767, 30-000803, 30-000804, 30-000805, 30-000806, 30-000807, 30-000808
OR-01053		1990	Bissell, Ronald M.	Cultural Resources Reconnaissance of a 16 Acre Parcel on the Marine Corps Air Station, Tustin, Orange County, California	RMW Paleo Associates, Inc.	
OR-01099		1979	Cooley, Theodore G.	Archaeological Resources Assessment Conducted for Proposed Irvine Ranch Water District Pipeline Right of Ways	Archaeological Resource Management Corp.	30-000344, 30-000349, 30-000382, 30-000383, 30-000556, 30-000647, 30-000806, 30-000807, 30-000808, 30-000809, 30-000810, 30-000811
OR-01355		1984	Cottrell, Marie	A Cultural Resources Assessment Conducted for the Extension of Project Site a Marine Corps Air Station (h) Tustin	Archaeological Resource Management Corp.	
OR-01357		1993	White, Robert S. and Laura S. White	An Extended Literature and Records Search Addressing Prehistorical Archaeological Resources Located Within the Boundaries of the US Marine Corps Air Station (mcas), Tustin Orange County, California	Archaeological Associates, Ltd.	30-000353, 30-000373, 30-000381

Report List

Tustin Legacy

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-02225	Other - Irvine Ranch	1978	Strozier, Hardy	The Irvine Company Planning Process and California Archaeology- A Review and Critique	The Irvine Company	
OR-02534		1976		Annual Report to The Irvine Company from Archaeological Research, Inc.	ARI	30-000051, 30-000064, 30-000099, 30-000100, 30-000106, 30-000119, 30-000130, 30-000184, 30-000196, 30-000197, 30-000484, 30-000518, 30-000575
OR-03240		2005	Anonymous	An Economically Viable Developer Expression for the Hangar 29 Compex; Adaptive Re-use @ Tustin Legacy a Proposed Conversion to a Public/Private Indoor Motorcycles Training Center	The Dome Development Group	
OR-03241		2005	Anonymous	Request for Developer Expressions of Interest and Proposals Southerly Hangar at the Former MCAS Tustin City of Tustin, California	Centex/Shea	30-160312
OR-03256	Paleo -	2005	Scott, Kim, Julie Scrivner Broadie, Brian Glenn, and Sherri Gust	Cultural Resources Monitoring Report for the Tustin Villas Project, City of Tustin, California	Cogstone Resource Management, Inc.	
OR-03409		2006	Smith, Brooks R. and Deborah McLean	Archaeological Mitigation Monitoring Report, Orange County Regional Sheriff Training Facility, City of Tustin, Orange County, California	LSA Associates, Inc.	
OR-03486		2007	Baker, Cindy and Mary L. Maniery	Cultural Resource Inventory and Evaluation of United States Army Reserve 63d Regional Readiness Command Facilities	PAR Environmental Services, Inc.	19-003659, 19-186589, 19-187950, 19-187951, 19-187952, 19-187953, 19-187954, 19-187955, 19-187956, 30-176836, 30-176837
OR-03500	Paleo -	2006	Demcak, Carol R. and Hugh M. Wagner	Report of Archaeological and Paleontological Monitoring of Tustin Legacy Project Area, Former Marine Corps Air Station, Tustin, California	Archaeological Resource Management Corp.	30-001652
OR-03501		2006	Demcak, Carol R.	Report of Test Level Investigations at Centex-1 (CA-ORA-1652), City of Tustin, Orange County, California	Archaeological Resource Management Corp.	30-001253, 30-001652
OR-04000		2010	Strauss, Monica, Ehringer, Candace, and Bray, Madeleine	Irvine Ranch Water District Wells 21 and 22 and Tustin Legacy Well 1 (TL-1) Projects, Phase I Cultural Resources Assessment	ESA	30-000300, 30-000301, 30-000350, 30-000351, 30-000353, 30-000373, 30-000381, 30-001652

Report List

Tustin Legacy

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-04136		2000	Weitze, Karen and Christy Dolan	Historic American Building Survey for the Marine Corps Air Station, Tustin Lighter-Than-Air Ship Hangarss (HABS No. CA-2707), Orange County, California	KEA Environmental, Inc.	
OR-04137		2008	Unknown	The Tustin Hangars: Titans of History - An Historical Account of the MCAS Tustin Hangars	RBF Consulting and Petrone Communications	
OR-04220		2012	Helton, Clint	Cultural Resources Analysis for the Tustin US Army Reserve Center Proposed Military Construction Project	CH2M Hill	
OR-04265		2013	Brown, Joan, Deering, Mark, and Sawyer, William	Archaelogical Resource Monitoring During Excavation Activities for Tustin Legacy Expansion, City of Tustin, County of Orange, California	Paleo Solutions	30-001725, 30-001726, 30-100190, 30-100191, 30-100192, 30-100193, 30-100194, 30-100195, 30-100196, 30-100197, 30-100198, 30-100199, 30-100200, 30-100201
OR-04353		1990	Bissell, Ronald M.	Cultural Resources Reconnaissance of Three Small Parcels on the Marine Corps Air Station, Tustin, Orange County, California	RMW Paleo Associates, Inc.	30-000381
OR-04530		2017	Kay, Michael	CULTURAL RESOURCES MONITORING REPORT, TUSD PHASE I LEGACY, City of Tustin, Orange County, California	Paleo Solutions, Inc.	

ATTACHMENT B

NAHC Sacred Lands File Search Results

August 18, 2023

For: Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

From: Emily T. Soong
BFSA Environmental Services, a Perennial Company
14010 Poway Rd. Suite A
Poway, CA 92064

Re: Request for Sacred Lands File and Native American Contact List for the Tustin Legacy Specific Plan Amendment Project, Tustin, Orange County, California.

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: Tustin Legacy Specific Plan Amendment Project (Project No. 23-221). The project is an archaeological study within Tustin Legacy in Tustin, Orange County, California. Specifically, the project is in Sections 46, 47, 62, Township 5 South, Range 9 West as shown on the USGS *Tustin*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.

Thank you for your time.

Sincerely,

Emily T. Soong
Graphics/GIS
Billing: 14010 Poway Road, Suite A, Poway, CA 92064
Phone: 858-484-0915
Email: esoong@bfsa.perennialenv.com

Attachments:
USGS 7.5 *Tustin,* California, topographic maps with project area delineated.
Sacred Lands File request form

Sacred Lands File & Native American Contacts List Request
NATIVE AMERICAN HERITAGE COMMISSION
915 Capitol Mall, RM 364 ∗ Sacramento, CA 95814 ∗ (916) 653-4082
(916) 657-5390 – Fax ∗ nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: Tustin Legacy Specific Plan Amendment Project (Project No. 23-221)

County: Orange

USGS Quadrangle Name(s): *Tustin*

Sections 46, 47, 62, Township 5 South, Range 9 West

Company/Firm/Agency: BFSA Environmental Services, a Perennial Company

Contact Person: Emily T. Soong

Street Address: 14010 Poway Road, Suite A

City: Poway Zip: 92064

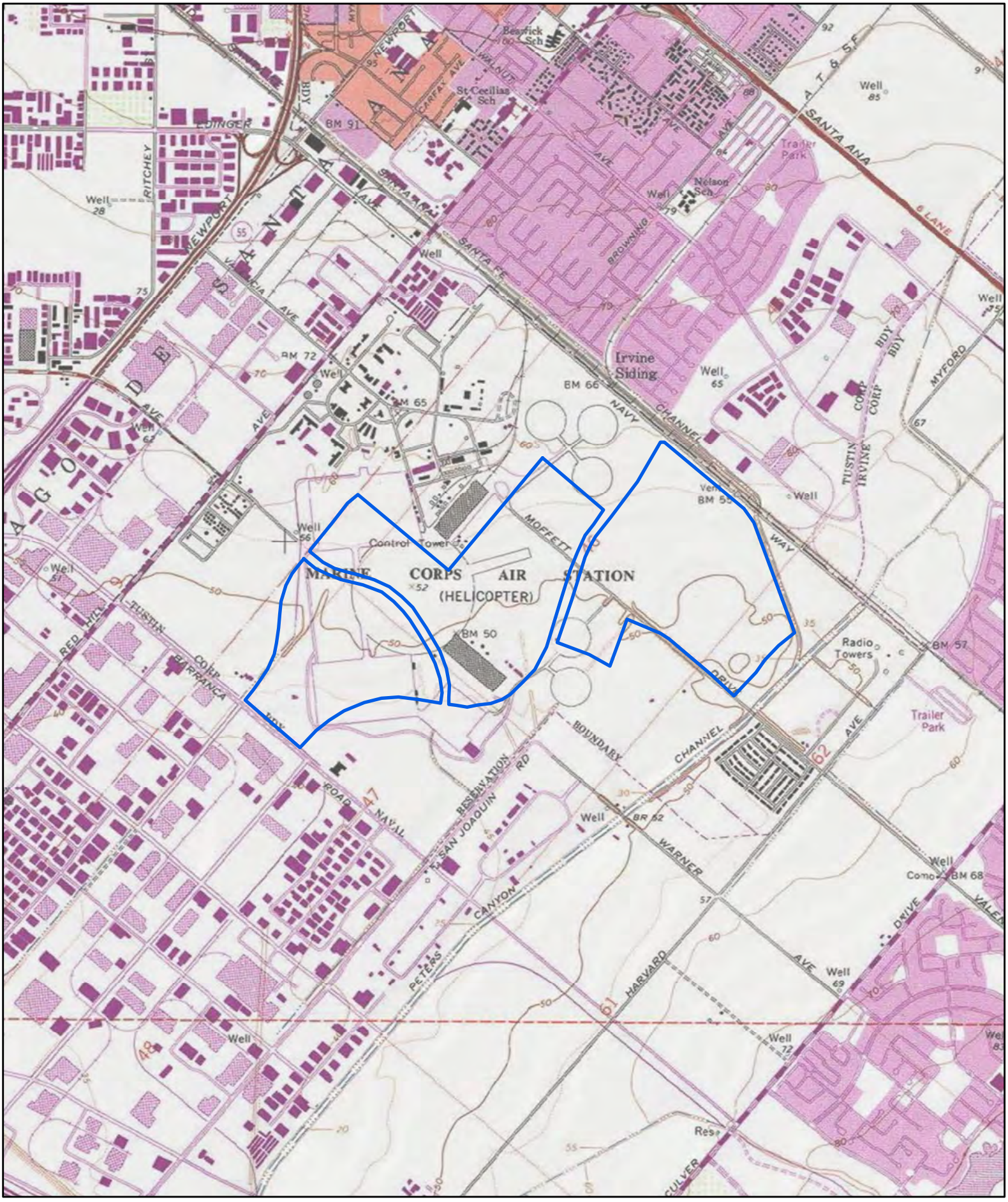
Phone: 858-484-0915

Fax: 858-679-9896

Email: esoong@bfsa.perennialenv.com

Project Description:

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: Tustin Legacy Specific Plan Amendment Project (Project No. 23-221). The project is an archaeological study within Tustin Legacy in Tustin, Orange County, California. Specifically, the project is in Sections 46, 47, 62, Township 5 South, Range 9 West as shown on the USGS *Tustin*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.



Tustin Legacy Specific Plan Amendment Project
USGS *Tustin* Quadrangle
(7.5-minute series)

ETS BFSAES: 8/18/2023

NATIVE AMERICAN HERITAGE COMMISSION

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Reginald Pagaling
Chumash

VICE-CHAIRPERSON
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Laurena Bolden
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Cahuilla

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Vacant

EXECUTIVE SECRETARY
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NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

September 11, 2023

Emily T. Soong
BFSA Environmental Services

Via Email to: esoong@bfsa.perennialenv.com

Re: Tustin Legacy Specific Plan Amendment Project, Orange County

Dear Ms. Soong:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Orange County
9/11/2023

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrieleno Band of Mission Indians - Kizh Nation	N	Andrew Salas, Chairperson	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno Band of Mission Indians - Kizh Nation	N	Christina Swindall Martinez, Secretary	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno/Tongva San Gabriel Band of Mission Indians	N	Anthony Morales, Chairperson	P.O. Box 693 San Gabriel, CA, 91778	(626) 483-3564	(626) 286-1262	GTTribalcouncil@aol.com	Gabrieleno
Gabrielino /Tongva Nation	N	Sandonne Goad, Chairperson	106 1/2 Judge John Aiso St., #231 Los Angeles, CA, 90012	(951) 807-0479		sgoad@gabrielino-tongva.com	Gabrielino
Gabrielino Tongva Indians of California Tribal Council	N	Robert Dorame, Chairperson	P.O. Box 490 Bellflower, CA, 90707	(562) 761-6417	(562) 761-6417	gtongva@gmail.com	Gabrielino
Gabrielino Tongva Indians of California Tribal Council	N	Christina Conley, Cultural Resource Administrator	P.O. Box 941078 Simi Valley, CA, 93094	(626) 407-8761		christina.marsden@alumni.usc.edu	Gabrielino

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrielino-Tongva Tribe	N	Sam Dunlap, Cultural Resource Director	P.O. Box 3919 Seal Beach, CA, 90740	(909) 262-9351		tongvatcr@gmail.com	Gabrielino
Gabrielino-Tongva Tribe	N	Charles Alvarez, Chairperson	23454 Vanowen Street West Hills, CA, 91307	(310) 403-6048		Chavez1956metro@gmail.com	Gabrielino
Juaneno Band of Mission Indians Acjachemen Nation - Belardes	N	Joyce Perry, Cultural Resource Director	4955 Paseo Segovia Irvine, CA, 92603	(949) 293-8522		kaamalam@gmail.com	Juaneno
Juaneno Band of Mission Indians Acjachemen Nation 84A	N	Heidi Lucero, Chairperson, THPO	31411-A La Matanza Street San Juan Capistrano, CA, 92675	(562) 879-2884		jbmian.chairwoman@gmail.com	Juaneno
Pala Band of Mission Indians	F	Alexis Wallick, Assistant THPO	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3537		awallick@palatribe.com	Cupeno Luiseno
Pala Band of Mission Indians	F	Shasta Gaughen, Tribal Historic Preservation Officer	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3515	(760) 742-3189	sgaughen@palatribe.com	Cupeno Luiseno
Santa Rosa Band of Cahuilla Indians	F	Lovina Redner, Tribal Chair	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	lsaul@santarosa-nsn.gov	Cahuilla
Soboba Band of Luiseno Indians	F	Jessica Valdez, Cultural Resource Specialist	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261	(951) 654-4198	jvaldez@soboba-nsn.gov	Cahuilla Luiseno

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Tribal Historic Preservation Officer	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279	(951) 654-4198	jontiveros@soboba-nsn.gov	Cahuilla Luiseno

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Tustin Legacy Specific Plan Amendment Project, Orange County.

Appendix C 2022 Annual Mitigation Monitoring Report

2022 Annual Mitigation Monitoring and Status Report

for

Final Joint Environmental Impact Statement/Environmental Impact Report (As modified by Final Supplement #2, Final Supplement #1 and Addendum to FEIS/EIR)

For the Disposal and Reuse of MCAS Tustin

SCH No. 94071005

City of Tustin
Community Development Department
300 Centennial Way
Tustin, CA 92780

Activities that took place in 2022 and/or are currently in progress are identified in *Italic*.

Introduction:

Pursuant to the Mitigation Monitoring and Reporting Program (MMRP) for the Disposal and Reuse of MCAS Tustin, an annual review and a brief progress memorandum based on that review shall be prepared by each applicable city (City of Tustin or City or Irvine). The City of Tustin's annual review and progress memorandum provides the following:

1. A general description of the project's status, including actual or projected completion dates, if known.
2. The current status for each mitigation measure.

Background:

On January 16, 2001, the City of Tustin certified the Program Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR) for the reuse and disposal of MCAS Tustin. The FEIS/EIR evaluated the environmental impacts of the reuse and disposal of MCAS-Tustin, which included the adoption of a Specific Plan and other implementing actions. On December 6, 2004, the City of Tustin adopted Resolution No. 04-76 certifying a Supplement (Final Supplement #1) and Resolution No. 04-77 adopting the revised Mitigation Monitoring Report Program to the FEIS/EIR. On April 3, 2006, the City Council adopted Resolution No. 06-43 approving an Addendum to the FEIS/EIR and, on May 13, 2013, the City Council adopted Resolution No. 13-32 approving a second Addendum to the FEIS/EIR for the Disposal and Reuse of MCAS Tustin. On July 5, 2017, the City of Tustin adopted Resolution No. 17-23 certifying a Supplement (Final Supplement #2) and adopting the revised Mitigation Monitoring Report Program to the FEIS/EIR.

Included in Resolution Nos. 00-90, 04-77, 06-43, 13-32, and 17-23 was a requirement for a Mitigation Monitoring and Reporting Program (MMRP) for the Disposal and Reuse of MCAS Tustin. The purpose of the MMRP is to report accomplishment of mitigation measures required by the FEIS/EIR.

Mitigation measures and implementation measures identified in the FEIS/EIR, Final Supplement #2, Final Supplement #1, and Addendums for the disposal and reuse of MCAS Tustin have been incorporated into a table. Each mitigation measure and implementation measure is listed separately on the table with appropriate space for monitoring the progress of the implementation of each measure. Implementation measures were also required where environmental impacts were less than significant, but supported the proposed development within the reuse plan area concurrent with demand. Implementation measures and mitigation measures are both discussed in this MMRP, and are equally enforceable.

The following information is identified in the table:

- The measures listed by environmental impact area in the same order as they are listed in the Final EIS/EIR, Final Supplement #1 and #2, and Addendums;
- The timing of implementation of the mitigation or implementation measure;
- The agency responsible for compliance;
- The appropriate agency to enforce the mitigation measure or implementation measure; and
- Status of the mitigation or implementation measure.

The mitigation measures and implementation measures in the table are listed by environmental impact area in the same order as they are listed in the Final EIS/EIR, Final Supplement #2, Final Supplement #1, and Addendums.

Approved/Completed/Under Construction Activities:

Residential/Commercial/Institutional Activities:

- Army Reserve Land Exchange/Center Relocation (Red Hill Avenue and Warner Avenue): The City and the U.S. Army agreed on a land exchange to construct a new Army Reserve Center in 2015. The new Army Reserve Center is complete and located at the corner of Red Hill Avenue and Warner Avenue. The existing Army Reserve Center, located at the corner of Tustin Ranch Road and Barranca Parkway, is now owned by the City *and is being used for various purposes.* This site is also the location of a temporary emergency shelter serving the City.

- Brookfield Homes Southern California *LLC – The Landing at Tustin Legacy* (Portion of Planning Areas 8, 13, and 14): The City Council approved a DDA with Brookfield Homes *Southern California LLC* and associated entitlement applications to construct 400 for-sale residential units on approximately 25.4 acres. *Close of escrow occurred in September 2021, model home construction is complete, and construction sales are ongoing.*

- County of Orange – Orange County Animal Care Facility (1630 Victory Road): The County of Orange entered into a lease with the South Orange County Community College District with a commitment to construct a new Animal Care facility in May 2016. The County also entered into a Cooperative Agreement with the City to ensure compliance with the Specific Plan. In 2016, the County of Orange applied for a new animal care facility on a 10-acre site. The project was reviewed and approved by the City in July 2016. The project was completed in late 2017 and opened to the public in Spring 2018.

- County of Orange Tustin Family Campus (15405 Lansdowne Road): A multi-treatment campus which includes four (4) stand-alone residential homes; three (3) two-story residential buildings; a two-story campus service center; and a maintenance building with a serving capacity of 90 beds for abused and neglected children and their parents and emancipated youth to be operated by the Orange County Social Services Agency.

- Flight Venture LLC – Flight at Tustin Legacy (formerly Cornerstone I): The City Council approved the development of a creative office campus in November 2016. The development consists of approximately 390,000 SF and includes a variety of uses such as: research and development; professional office; specialized employment; a food hall; and, incorporates a connection into Tustin Legacy Linear Park. Construction of the core and shell is complete with tenants occupying the campus and the food hall is open to the public. A Certificate of Compliance for the project was issued in March 2020*, and tenant improvements are ongoing.*

- The Irvine Company – Amalfi Apartments (16000 Legacy Road): All 533 units and community amenities are complete.

- Heritage Elementary School (15400 Lansdowne Road): Heritage Elementary School opened to students in Fall of 2016. This new elementary school specializes in being a STEAM (Science, Technology, Engineering, Arts, and Math) school.

- John Laing Homes – Tustin Field I (Harvard Avenue and Edinger Avenue): All 376 units are complete.

- John Laing Homes – Tustin Field II (Harvard Avenue and Edinger Avenue): All 189 homes are complete.

- "Legacy Magnet Academy" (Valencia Avenue and Tustin Ranch Road): The Tustin Legacy School Facilities Project was approved by the TUSD Board of Education and by the Tustin City Council in August 2015 and was amended in August 2016 and in January 2019. The plan calls for construction of a middle and high school on 40 acres near the corner of Tustin Ranch Road and Valencia Avenue. The site transferred, and the school *opened* its doors to students for the 2020-2021 school year.

- Lennar Homes - Columbus Square/Columbus Grove: All 1,540 homes and community amenities are complete.

- Lennar Homes of Southern California (Formerly CalAtlantic Homes) – Greenwood in Tustin Legacy (250 Downs Road): All 375 single family detached units and community amenities are complete.

- Lennar Homes of Southern California – Levity in Tustin Legacy (Tustin Ranch Road/Victory Road): The City Council approved a DDA with CalAtlantic Homes (now Lennar Homes of Southern California) to construct 218 units on approximately 14 acres. *All 218 homes and community amenities are complete.*

- Orange County Rescue Mission – Village of Hope (1 Hope Drive): A 192-bed transitional home for the homeless at Tustin Legacy to be operated by the Orange County Rescue Mission. In November 2007, the Planning Commission approved an amendment to the Village of Hope Conditional Use Permit to allow for a medical/dental clinic to operate in conjunction with the transitional home. Construction for this medical/dental clinic is complete. In October 2015, the Planning Commission approved a request for the Village of Hope to increase their transitional housing facility capability from 192 beds to 387 beds, construct a new parking lot, and establish an ancillary church use at the Village of Hope transitional housing facility. A 0.57-acre parcel was conveyed to the Orange County Rescue Mission in November 2016 to construct the parking lot.

- Rancho Santiago Community College District – Sheriff's Training Academy (15991 Armstrong Avenue): The Sheriff's training facility is complete; however, a portion of the property remains undeveloped. RSCCD has not identified any plans for development the remaining portion of the site.

- Regency Centers – The Village at Tustin Legacy (Kensington Park Drive/Edinger Avenue): Project includes 248,292 square feet of non-residential uses comprised of two (2) major components including: A retail center with grocery store, pharmacy, childcare, food service, and general retail uses along Valencia Avenue and Kensington Drive; and, a medical plaza with a medical center, an acute care hospital/rehabilitation facility, and medical office/retail buildings fronting Kensington Park Drive

and Edinger Avenue. The retail shopping center was completed in November 2017 and the Encompass Health Rehabilitation Hospital was completed in May 2022.

- St. Anton Partners – Anton Legacy Apartments (3100 Park Avenue): All 225 affordable apartment units, including 88 very low, 73 low, and 64 moderate low-income units, and community amenities are complete. St. Anton Partners, as part of their DDA, constructed a 4.7-acre park called Victory Park that was subsequently conveyed to the City after completion in August 2015.

- South Orange County Community College District (SOCCCD) – Advanced Technology and Education Park (ATEP) Campus (Armstrong Avenue and Valencia Avenue): Phase I of the SOCCCD Advanced Technology Education Park (ATEP) was completed in 2004 and offered classes through early 2018. The Concept Plan for Phase 3A was approved by the City on July 26, 2010 authorizing up to 305,000 square feet of educational uses; however, in August 2013, the City and the SOCCCD completed a Land Exchange Agreement and a Development Agreement and Amended and Restated (Conveyance) Agreement to: a) exchange and consolidate parcels to better enhance development potential for City and SOCCCD properties; b) maintain a minimum of 51 percent educational uses (Land Use Category 1) while allowing additional non-educational uses (Land Use Category 2) at the ATEP campus; c) increase the allowable square footage as a result of adding a new local street Victory Road (formerly Bell Avenue); and d) transfer control of the Phase 1 campus to the City for its use in the future. Construction of the first building, parking lot areas, and portions of the interior circulation have been completed. Classes at the first building, offering instruction in career technical programs for Irvine Valley College, commenced in Spring 2018. Control of the Phase I campus was given to the City in early 2018.

- Temporary Emergency Shelter – The City of Tustin, in an effort to address the lack of emergency shelter beds for the homeless in Tustin, established a shelter for up to 80 temporary emergency shelter beds in Spring 2019. The Tustin Temporary Emergency Shelter provides services such as food, beds, showers, pet accommodations, and access to assistance. *The shelter continues to operate in 2022.*

- Tustin Legacy Park (Barranca Parkway and Red Hill Avenue to Armstrong): This 26-acre portion of the linear park is considered the "anchor" to the linear park which is anticipated to run throughout the Tustin Legacy area in the future. The park incorporates the Barranca Detention Basin within its concept plan, and includes direct linkages to the Flight project, mentioned above. This segment of the park opened to the public in late 2019.

- Bark Barracks at Tustin Legacy Park: Design work began for Tustin's first dog park to be located within Tustin Legacy Park. This one-acre amenity will include separate areas for large and small dogs, with shade and seating areas, two-gate entry systems and various dog friendly amenities. The name of the dog park was chosen by the Community Services Commission after the public was invited to submit name suggestions.

- Vestar – The District at Tustin Legacy (Barranca Parkway and Jamboree Road): Construction of the 1 million square-foot Class A retail center is complete with the exception of certain adjacent infrastructure improvements. On October 21, 2010 the City and Vestar entered into a Fifth DDA amendment and Fifth Amendment to the Infrastructure and Payment Agreement deferring the construction of certain storm drain related infrastructure improvements within Barranca Parkway.

Certain required improvements identified in the Fifth DDA amendment and Fifth Amendment to the Infrastructure and Payment Agreement have not yet been completed. Vestar also completed Warner Avenue storm drain in 2013. The City issued a Certificate of Compliance for the project in August 2017.

- Veterans Sports Park (Valencia Avenue): This approximately 30-acre park is designed as a community/sports park and *is able to* accommodate large group activities and offer a wide variety of facilities including: Four (4) lighted soccer fields; three (3) lighted ball fields; four (4) lighted tennis courts; two (2) lighted basketball courts; two (2) lighted sand-volleyball courts; eight (8) lighted pickleball courts; a skate park; a splash pad; and, a veteran's memorial. The veteran's plaza and memorial area, designed as a place of honor, *is* located at the west side of the park. The park opened to the public on July 10, 2020 and officially dedicated on November 11, 2020.

- Remaining Development Sites:
  The City and the former Master Developer, Tustin Legacy Community Partners, LLC (TLCP), entered into a Disposition and Development Agreement (DDA) in April 2006, which was subsequently amended in March 2007 and in June 2007. The DDA identified the terms of development of an approximate *820-acre* footprint at Tustin Legacy and the City's sale of the property to TLCP, which resulted in conveyance of the first of four phases of property from the City to TLCP in 2007; however, TLCP defaulted on its obligations per the DDA, and the DDA was terminated on July 6, 2010. As a consequence, title to the Phase 1 property was transferred back to the City on August 5, 2010. Prior to termination of the DDA, TLCP completed a majority of the site preparation activities, including building and runway removals, and a large amount of the mass grading activities.

  The City subsequently completed an updated disposition plan: the "Tustin Legacy Disposition Strategy for the Former Master Developer Footprint" as confirmed by the City Council on April 25, 2011. The Disposition strategy provides a framework for moving forward with completing the Tustin Legacy project pursuant to the Specific Plan with the city assuming a more limited Master Developer role by marketing smaller segment "Disposition Packages" (DPs) or parcel groupings based on market and infrastructure needs. Ten Disposition Packages (1A, 1B, 1C and 2 through 8) were originally created with the City reserving the ability to consolidate or otherwise refine over time as market needs evolve.

  The City Council held two New Vision Concept workshops regarding the remaining Tustin Legacy Disposition Strategy, the first on June 29, 2013, and the second on December 5, 2013. The City council authorized staff to move forward with a Specific Plan Amendment for the new vision concept. During 2017, the amended Tustin Legacy Specific Plan was adopted. The Tustin Legacy Specific Plan incorporates mixed-use urban and *transit-oriented* development. City Staff is now implementing the amended and adopted Specific Plan.

  Adjacent to The Landing at Tustin Legacy, the City will be constructing the "Alley Grove Promenade" in Neighborhood D South. The project will consist of an approximately two-acre enhanced walkway which provides a pedestrian connection from Armstrong Avenue to Tustin Ranch Road through Neighborhood D South at Tustin Legacy, linking the Flight office campus to the District shopping center. The project also includes several sport courts for neighborhood use. The project is currently in the design phase.

Infrastructure Activities

Major Infrastructure includes roads and may also include street lighting, traffic control, dry and wet utilities, and other work required in accordance with Governmental Requirements and FEIR/EIS requirements.

- Armstrong Avenue – Valencia Avenue to Warner Avenue: This project has been completed.

- Armstrong Avenue – Barranca Parkway to Warner Avenue: This project was opened to traffic with one (1) new signalized intersection (at Flight Way) in conjunction with the completion of the Flight development in 2019.

- Edinger Avenue – Red Hill Avenue to Kensington Park Drive: This project has been completed.

- Flight Way – Barranca Parkway to Tustin Legacy Park: This project creates a signalized entry to the Flight at Tustin Legacy project, along with access to the future parking lot for Tustin Legacy Park. This project has been completed.

- Harvard Avenue – Barranca Parkway to just south of the Southern California Regional Rail Authority/Orange County Transportation Authority (OCTA/SCRRA) railroad: This project has been completed.

- Kensington Park Drive – Edinger Avenue to Valencia Avenue: This project has been completed.

- Legacy Road (formerly Kensington Park Drive) extension – Valencia Avenue to TUSD entry: This project is complete. The project *is completed and* opened to traffic in conjunction with the completion of Legacy Magnet Academy.

- Legacy Road – Tustin Ranch Road to Warner Avenue: This project has been completed.

- Lansdowne Road Signal – This project has been completed.

- Marble Mountain Road (renamed as “Sweet Shade” in the City of Irvine) - This project has been completed.

- Moffett Drive extension (and bridge) – Park Avenue to Peters Canyon Channel: This project has been completed.

- Moffett Drive extension – Park Avenue to TUSD entry: This project has been completed. The portion of Moffett Drive between Tustin Ranch Road and TUSD entry *opened* to traffic in conjunction with the completion of Legacy Magnet Academy.

- Neighborhood D South Infrastructure – This project consists of two phases and provides backbone and local infrastructure within Neighborhood D South. Phase 1 grading activities began in late 2020, with the Phase 1 component expected to be complete in 2023. Phase 2 design and construction will

coincide with the timing of future development within Neighborhood D South. *New public streets include Compass Ave, Helber Way, Peebler Way, Swaim Way, Veterans Way and extensions of Flight Way and Airship Ave.*

- Park Avenue – Victory Road to Jamboree Road Southbound Off-ramp – This project has been completed. The portion from Victory Road to Moffett Drive has been completed.

- Park Avenue widening - Tustin Ranch Road to Warner Avenue: This project adds a second through lane along Park Avenue. This project has been completed.

- Peter's Canyon Channel – Channel widening from SCRRA/OCTA railroad track to Warner Avenue has been completed.

- Peters Canyon Channel – In August 2017, the City entered into an agreement with the Orange County Flood Control District (OCFCD) and the County of Orange to amend Agreement D02-119 that pertains to the construction of Peters Canyon improvements. This amendment stipulates that Peters Canyon improvements shall commence prior to the issuance of certificates of use and occupancy for the 1401st residential unit or certificate of occupancy. The channel widening project *has been completed.*

- Peter's Canyon Bike Trail – Trail construction in conjunction with Peter's Canyon Channel widening project has been completed.

- Red Hill Avenue – Edinger Avenue to Barranca Parkway: The widening of northbound Red Hill Avenue to accommodate a fourth lane and installation of a raised median has been completed.

- Tustin Field I Bike – Trail on North side of Project: This project has been completed.

- Tustin Ranch Road extension – Warner Avenue to Walnut Avenue: This project has been completed.

- Tustin Ranch Road – Barranca Parkway to Warner Avenue: This project has been completed.

- Valencia Avenue – Kensington Park Drive to Tustin Ranch Road: This project has been completed.

- Valencia Avenue – Red Hill Avenue to Kensington Park Drive: This project has been completed.

- Victory Road (formerly Bell Avenue) – Red Hill Avenue to Armstrong Avenue: This project has been completed.

- Victory Road (formerly Legacy Road) – Tustin Ranch Road to Park Avenue. This project has been completed.

- Warner Avenue – Red Hill Avenue to Tustin Ranch Road: This project has been completed.

- Warner Avenue – Tustin Ranch Road to east of Park Avenue*:* Warner Avenue has been re-striped to accommodate a third lane through the intersection of Park Avenue. This project has been completed.

Status of Mitigation:

Attached to this report is a table that shows the status of implementation and mitigation measures listed in the MMRP.

MITIGATION MONITORING AND REPORTING PROGRAM
TUSTIN LEGACY
Revised February 2022

The following are measures included in the Final EIS/EIR, Final Supplement #2, Final Supplement #1, and Addendum for the disposal and reuse of MCAS Tustin that identifies both mitigation and implementation measures. Implementation measures are to be required where environmental impacts are less than significant, but supported the proposed development within the reuse plan area concurrent with demand. Both implementation and mitigation measures are identified in the adopted Mitigation and Monitoring Report Program, Final Supplement #2, Final Supplement #1, and Addendums (Resolution Nos. 00-90, 04-77, 06-43, 13-32, and 17-23) and are equally enforceable.

Measure		Timing and Implementation	Mitigation Compliance Responsibility	Mitigation Monitoring and Enforcement Responsibility	Status
Mitigation Measures for Land Use					
LU-1.	The City of Tustin shall amend its General Plan and zoning ordinance to be consistent with planned land uses. Any zoning ordinance shall include site design measures such as buffering, landscaping, screening, and setbacks, to ensure high quality development and compatibility between land uses. The goal is to assure that the overall appearance of development on the site is at least similar in quality to other master planned areas in Tustin and other adjacent cities.	Prior to a final map recordation (except for financing and re-conveyance purposes) within the Reuse Plan Area within the City of Tustin.	City of Tustin	Community Development Department (Tustin)	Completed through adoption of Resolution No. 00-91 on January 16, 2001, for General Plan Amendment 00-001 and through adoption of the MCAS Tustin Specific Plan through Ordinance No. 1257 on February 3, 2003. On April 3, 2006, the City Council adopted Resolution No. 06-43 approving an addendum to the Final Environmental Impact Statement/ Environmental Impact Report for the Disposal and Reuse of MCAS Tustin and Zone Change 05-002 through Ordinance No. 1311. On May 13, 2013, the City Council adopted Resolution No. 13-32 approving an addendum to the Final Environmental Impact Statement/ Environmental Impact Report for the Disposal and Reuse of MCAS Tustin and Specific Plan Amendment 2013-0001 through Ordinance No. 1432.

Measure		Timing and Implementation	Mitigation Compliance Responsibility	Mitigation Monitoring and Enforcement Responsibility	Status
					On July 5, 2017, the City Council adopted Resolution No. 17-23 certifying a Supplement (Final Supplement #2) and adopting the revised Mitigation Monitoring Report Program to the FEIS/EIR.
LU-2.	The City of Irvine shall amend its General Plan and zoning ordinance to be consistent with planned land uses. Any zoning ordinance shall include site design measures such as buffering, landscaping, screening, and setbacks, to ensure high quality development and compatibility between land uses. The goal is to assure that the overall appearance of development on the site is at least similar in quality to other master planned areas in Tustin and other adjacent cities.	Prior to a final map recordation (except for financing and re-conveyance purposes) within the Reuse Plan Area within the City of Irvine.	City of Irvine	Community Development Department (Irvine)	Complete
(a)	The City of Tustin or City of Irvine, as appropriate, shall ensure that infrastructure is constructed in phases as triggered by identified thresholds in Table 4-2 of the revised Specific Plan Phasing Plan, Phasing Plan Requirements (see Table 4-2 at the end of this Mitigation Monitoring and Reporting Program). The Phasing Plan provides an organizational framework to facilitate development of the reuse plan area in tandem with infrastructure necessary to support the planned development.	See Table 4.3-1 of the Final EIS/EIR or Table 4-2 at the end of this Mitigation Monitoring and Reporting Program for each specific triggering mechanism.	City of Tustin and/or City of Irvine, as applicable	Community Development Department/ Public Works (Tustin and/or Irvine, as applicable)	• **The District** The project complies with phasing requirements; all infrastructure improvements were included in DDA 04-02, or as conditioned by Resolution Nos. 04-73, 04-74, 3920, 3921, 3922, 3923, and 3924. • **Columbus Grove (Tract 16582)** The project complies with phasing requirements; all subdivision infrastructures will be provided or paid for by the applicant as conditioned by Resolution Nos. 3946 and 3947. Public improvements are complete. As required by the EIS/EIR, the City entered into a Cooperative Agreement with the Marble Mountain Partners to ensure the developer's responsibility for payment or construction of Tustin

Measure		Timing and Implementation	Mitigation Compliance Responsibility	Mitigation Monitoring and Enforcement Responsibility	Status
	(As amended by Addendum) This framework reflects the fact that each component of the infrastructure has its own threshold for accommodating additional development toward build-out of the reuse plan area. The triggering mechanisms that identify timing of key infrastructure provisions are summarized in Table 4-2 of the revised Specific Plan Phasing Plan, Phasing Plan Requirements (see Table 4-2 at the end of this Mitigation Monitoring and Reporting Program).				Legacy Infrastructure and subsequently entered into an Acquisition and Funding Agreement as part of Assessment District No. 06-01 (Tustin Legacy/Columbus Villages) for funding and construction obligations of developer for required Tustin Legacy Infrastructure. • **Columbus Square (Tract 16581)** The project complies with the phasing requirement; the applicant, as conditioned by Resolution Nos. 3952 and 3953, will provide all subdivision infrastructures. Public improvements are complete. As required by the EIS/EIR, the City entered into a Cooperative Agreement with the Marble Mountain Partners to ensure the developer's responsibility for payment or construction of Tustin Legacy Infrastructure and subsequently entered into an Acquisition and Funding Agreement as part of Assessment District No. 06-01 (Tustin Legacy/Columbus Villages) for funding and construction obligations of developer for required Tustin Legacy Infrastructure. • **RSCCD (Sheriff's Training Academy)** The infrastructure to support the project was constructed concurrently with the project. • **Village of Hope** The project complies with infrastructure phasing requirements in the EIS/EIR. • **Tustin Family Campus** The project complies with phasing infrastructure requirements in the EIS/EIR.

Measure		Timing and Implementation	Mitigation Compliance Responsibility	Mitigation Monitoring and Enforcement Responsibility	Status
					• **SOCCCD (ATEP)** The infrastructure to support Phase 1 of the on-site project was constructed concurrently with the project; additional infrastructure to support future phases will be required to be constructed prior to or concurrently with future phases. • **Amalfi Apartment Homes – Irvine Company** The infrastructure to support the project was constructed concurrently with the project pursuant to the DDA. • **Anton Legacy – St. Anton Partners** The infrastructure to support the project was constructed concurrently with the project pursuant to the DDA. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** The project complies with phasing requirements as conditioned by City Council Resolution No. 14-14 and DDA 2013-03. • **The Village at Tustin Legacy – Regency Centers** The infrastructure to support the project was constructed concurrently with the project pursuant to the DDA and required infrastructure is complete. • **Orange County Animal Care Facility** The infrastructure to support the project was constructed concurrently with the project and the project is complete.

Measure		Timing and Implementation	Mitigation Compliance Responsibility	Mitigation Monitoring and Enforcement Responsibility	Status
					• **Army Reserve Center** The infrastructure to support the project was constructed concurrently with the project and the project is complete. • **Flight at Tustin Legacy – Flight Venture LLC** The infrastructure to support the project was constructed concurrently with the project pursuant to the DDA. • **Tustin Legacy Linear Park** The infrastructure to support the project has been constructed. • **Veterans Sports Park** The infrastructure to support the project has been constructed. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** The infrastructure to support the project has been constructed concurrently with the project, pursuant to the DDA. • ***The Landing at Tustin Legacy*– Brookfield Homes Southern California LLC** The infrastructure to support the project *is being* constructed concurrently with the project, pursuant to the DDA.

Measure		Timing and Implementation	Mitigation Compliance Responsibility	Mitigation Monitoring and Enforcement Responsibility	Status
					• **Remaining Development Sites** Pursuant to the Tustin Legacy Disposition Strategy, infrastructure and phasing obligations have been assigned to each Disposition Package based upon respective site needs and anticipated development sequencing to comply with the FEIS/EIR.

(b)	Prior to a final map recordation (except for financing and re-conveyance purposes), the development applicant shall enter into an agreement with the City of Tustin and City of Irvine and any appropriate regional utility agencies, districts, and providers, as applicable, to dedicate all easement, right-of-ways, or other land determined necessary to construct adequate utility infrastructure and facilities to serve the project as determined by the City, Agency, District, or other providers.	Prior to final map recordation (except for financing and re-conveyance purposes).	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** All dedications required by DDA 04-02, or as conditioned by Resolution Nos. 04-73, 04-74, 3920, 3921, 3922, 3923, and 3924 were included and recorded with the final map. • **Tustin Field I (Tract 16474)** All dedications required by Condition 6.1 of Resolution No. 3863 were included and recorded with the final map. • **Tustin Field II (Tract 16507)** All required easements by Condition 11.1 of Resolution No. 3885 were dedicated with recordation of Final Map 16507. • **Columbus Grove (Tract 16582)** All dedications required by Condition 3.3 of Resolution No. 3946 were included in the recorded final map. • **Columbus Square (Tract 16581)** Required dedications, as per Resolution No. 3952, were included in the final map and were recorded in March 2006.

					• **SOCCCD (ATEP)** All easements for Phase I project have been recorded; however, dedication of easements, rights-of-way, or other land determined necessary to construct adequate utility infrastructure and facilities to serve future phases of development as determined by the City, SOCCCD or other utility providers will need to be defined with each phase and recorded. • **RSCCD (Sheriff's Training Academy)** All easements have been recorded for the Sheriff's Training Facility; however, dedication of easements, rights-of-way, or other land determined necessary to construct adequate utility infrastructure and facilities to serve future phases of development as determined by the City, RSCCCD or other utility providers will need to be defined with any future phase and recorded. • **Village of Hope** All easements have been recorded. Requirement fulfilled. • **Amalfi Apartment Homes – Irvine Company** All required easements have been recorded pursuant to DDA 2012-001. • **Anton Legacy – St. Anton Partners** All required easements have been recorded pursuant to DDA 2012-002. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Required dedications as per Resolution No. 17-57 were included in the final map recorded on June 21, 2018.

					• **The Village at Tustin Legacy – Regency Centers** Required dedications as per Resolution No. 15-58 were included in the final map recorded on July 20, 2016. • **Orange County Animal Care Facility** Recordation of required easements are the responsibility of the County of Orange. • **Army Reserve Center** Recordation of required easements are the responsibility of the federal government. • **Flight at Tustin Legacy – Flight Venture LLC** Required dedications pursuant to Resolution No. 16-61 and the DDA were included in the final map recorded on June 27, 2017 and other instruments. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Required dedications pursuant to Resolution No. 17-57 and the DDA have been included in the final tract map recorded on June 21, 2018 and other current and future instruments. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Required dedications pursuant to Resolution No. 19-54 and the DDA have been included in the *final tract map recorded on August 26, 2021* • **Remaining Development Sites**

					The Final Sector B Map for Neighborhood E (Final Map 17144) and Neighborhoods B, D, and G (Final Map 17404 and 18197) for Conveyance Purposes Only have been approved. Dedication of easements, right-of-ways, or other land determined necessary to construct adequate utility infrastructure and facilities to serve future phases of development as determined by the City or other utility providers, will also need to be defined with each future phase and recorded as may be deemed necessary upon completion for each Disposition Parcel pursuant to the Disposition Strategy.
(c)	Prior to any final map recordation (except for financing and conveyance purposes), the development applicant shall enter into a secured agreement with the cities of Tustin and/or Irvine, as applicable, to participate on a pro-rated basis in construction of capital improvements necessary to provide adequate utility facilities.	Prior to final map recordation (except for financing and re-conveyance purposes).	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** DDA capital improvement obligations have been satisfied per CFD 07-01, per DDA 04-02, and the Infrastructure and Construction Payment Agreement and Amendments. • **Tustin Field I (Tract 16474)** DDA capital improvement obligations have been satisfied per CFD 04-1. • **Tustin Field II (Tract 16507)** DDA capital improvement obligations have been satisfied per CFD 04-1. • **Columbus Square (Tract 16581) and Columbus Grove (Tract 16582)** Per the Cooperative Agreement and CFD 06-01, developer has met their current obligation to fund necessary capital improvements. • **SOCCCD (ATEP)** Pursuant to the Development Agreement and Restated and Amended (Conveyance) Agreement, SOCCCD is required to construct all on-site improvements; however, the City has exempted SOCCCD from City CFD funded Tustin Legacy

					Infrastructure costs for the primary educational uses (Land Use Category 1) while it requires payment of its Fair Share of Infrastructure fees for non-educational uses (Land Use Category 2), and is still subject to assessments from outside utility purveyors regardless of the use of project and would be responsible for any costs that are necessary if SOCCCD proposes to modify or alter existing Tustin Legacy Infrastructure. • **RSCCD (Sheriff's Training Academy)** The initial Sheriff's Training Facility project is complete, including all on-site improvements by RSCCD. RSCCD capital improvement costs for public uses are exempt from Tustin Legacy Infrastructure obligation; however, RSCCD is still subject to assessments from outside utility purveyors. A portion of the site remains undeveloped and could involve a subsequent future phase. In such case, RSCCD will be responsible for any necessary on-site infrastructure. • **Village of Hope** Project is complete, including all on-site improvements by Village of Hope. An agreement was executed and provided the necessary dedications to ensure emergency access and construction of required utility infrastructure from an adjacent property owner (SOCCCD). • **Amalfi Apartment Homes – Irvine Company** DDA capital improvement obligations have been satisfied, Fair Share payment made. • **Anton Legacy – St. Anton Partners** DDA capital improvement obligations have been satisfied, Fair Share payment made. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)**

					DDA capital improvement obligations have been satisfied, Fair Share payment made. • **The Village at Tustin Legacy – Regency Centers** DDA capital improvement obligations have been satisfied, Fair Share payment made. • **Orange County Animal Care Facility** The City of Tustin has a cooperative agreement with the County of Orange. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. • **Army Reserve Center** The City of Tustin has a land exchange agreement with the Secretary of the Army. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. • **Flight at Tustin Legacy – Flight Venture LLC** DDA capital improvement obligations have been satisfied, Fair Share payment made. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** DDA capital improvement obligations have been satisfied via Tustin Legacy Infrastructure Program Fair Share payment. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC**

					DDA capital improvement obligations *have* satisfied via Tustin Legacy Infrastructure Program Fair Share payment. • **Remaining Development** Future developers will be required to participate on a pro-rated basis in funding and/or construction of capital improvements necessary to provide adequate utility facilities, as determined by the City in conjunction with any subsequent developer agreements entered into between the City and developers.
(d)	Prior to the issuance of permits for any public improvements or development project, a development applicant shall submit to the City of Tustin and City of Irvine, as applicable, information from IRWD which outlines required facilities necessary to provide adequate potable water and reclaimed water service to the development.	Prior to the issuance of permits for any public improvements or development project.	Project developer	Community Development Department (Tustin and/or Irvine, as appropriate)	• **The District** Will serve letter is on–file. All utilities are provided. • **Tustin Field I (Tract 16474)** Will serve letter is on–file. All utilities are provided. • **Tustin Field II (Tract 16507)** Will serve letter is on–file. All utilities are provided. • **Columbus Grove (Tract 16582)** Will serve letter is on–file. All utilities are provided. • **Columbus Square (Tract 16581)** Will serve letter is on–file. All utilities are provided. • **SOCCCD (ATEP)** IRWD has determined there will be adequate facilities to serve Phase 1 of the project; a will serve letter will need to be submitted for all future phases of development. • **Tustin Family Campus** IRWD has determined there will be adequate facilities to serve the project. All utilities are provided. • **RSCCD (Sheriff's Training Academy)**

					IRWD has determined there will be adequate facilities to serve the Sheriff's Training Facility project; however, IRWD will need to determinate if adequate facilities will be available for any future phases. • **Village of Hope** Will serve letter is on–file. All utilities are provided. • **Amalfi Apartment Homes – Irvine Company** Will serve letter is on–file. All utilities are provided. • **Anton Legacy – St. Anton Partners** Will serve letter is on-file. All utilities are provided. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Will serve letter is on-file. All utilities are provided. • **The Village at Tustin Legacy – Regency Centers** Will serve letter is on-file. All utilities are provided. • **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project Complete. All utilities provided. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. All utilities provided. • **Flight at Tustin Legacy – Flight Venture LLC** Will-serve letter is on file and improvements constructed. The project is complete. • **Tustin Legacy Linear Park**

					Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Will serve letter is on file. Improvements are *complete.* • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Will serve letter is on file. *Improvements are under construction.* • **Remaining Development** An Irvine Ranch Water District (IRWD) Sub Area Master Plan (SAMP) is currently in place. Future developer(s) will be required to provide a will serve letter in conjunction with any future entitlement applications.

(e)	Prior to the issuance of building permits, the project developer shall ensure that fire hydrants capable of flows in amounts approved by the OCFA are in place and operational to meet fire flow requirements. (As amended by Addendum)	Prior to the issuance of the certificates of use and occupancy.	Project developer	Community Development Department (Tustin and/or Irvine, as appropriate); OCFA	• **The District** Fire master plan approved and all fire hydrants were installed and inspected by OCFA. • **Tustin Field I (Tract 16474)** Fire master plan approved and all fire hydrants were installed and inspected by OCFA. • **Tustin Field II (Tract 16507)** Fire master plan approved and all fire hydrants were installed and inspected by OCFA. • **Columbus Grove (Tract 16582)** Fire master plan approved and all fire hydrants were installed and inspected by OCFA. • **Columbus Square (Tract 16581)** Fire master plan approved and all fire hydrants were installed and inspected by OCFA. • **Tustin Family Campus** OCFA has determined that the project plans and data show adequate flows to serve the project. • **SOCCCD (ATEP)** OCFA has determined that the project plans and data show adequate flows to serve Phase 1 of the project; OCFA will need to determine adequate flows for all future phases. • **RSCCD (Sheriff's Training Academy)** OCFA has determined that the project plans and data show adequate flows to serve the initial Sheriff's Training Facility project; however, OCFA will need to determine adequate flows will be available for any future phases. • **Village of Hope** Fire master plans reviewed and approved by OCFA.

					• **Amalfi Apartment Homes – Irvine Company** Fire master plan approved and fire hydrants were installed and inspected by OCFA. • **Anton Legacy – St. Anton Partners** Fire master plan approved and all fire hydrants were installed and inspected by OCFA. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Fire master plan approved and all fire hydrants were installed and inspected by OCFA. • **The Village at Tustin Legacy – Regency Centers** Fire master plan approved by OCFA and fire hydrants were installed and inspected by OCFA. • **Orange County Animal Care Facility** Fire master plan approved by OCFA and fire hydrants were installed and inspected by OCFA. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Fire master plan has been approved and improvements have been constructed. Construction is complete. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)**

					A fire master plan has been approved and improvements are complete. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** A fire master plan has been approved and improvements are *under construction*.
(f)	Prior to the issuance of permits for any public improvements or development project, a development applicant shall submit to the City of Tustin and City of Irvine, as applicable, information from IRWD or the City of Tustin which outlines required facilities necessary to provide adequate sanitary sewage service to the development.	Prior to the issuance of permits for any public improvements or development project.	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** IRWD and OCSD approval letters were provided. All on-site utilities have been constructed. • **Tustin Field I (Tract 16474)** IRWD and OCSD approval letters were provided. All on-site utilities are constructed. • **Tustin Field II (Tract 16507)** IRWD and OCSD approval letters were provided. All on-site utilities are constructed. • **Columbus Grove (Tract 16582)** IRWD and OCSD approval letters were provided. All on-site utilities are constructed. • **Columbus Square (Tract 16581)** IRWD and OCSD approval letters were provided. All on-site utilities are constructed. • **Tustin Family Campus** IRWD and OCSD have determined there will be adequate facilities to serve the project. All on-site utilities are constructed. • **SOCCCD (ATEP)** IRWD and OCSD have determined there will be adequate facilities to serve the Phase 1 project; determinations will be made for all future phases. • **RSCCD (Sheriff's Training Academy)**

					IRWD and OCSD have determined there will be adequate facilities to serve the initial Sheriff's Training Facility project; however, IRWD and OCSD will need to determine adequate facilities will be available for any future phases. • **Village of Hope** IRWD and OCSD approval letters were provided. All on-site utilities are complete. • **Amalfi Apartment Homes – Irvine Company** IRWD approval letter was provided. All on-site utilities are constructed. • **Anton Legacy – St. Anton Partners** IRWD approval letter was provided. All on-site utilities are constructed. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** IRWD approval letter was provided. All on-site utilities are constructed. • **The Village at Tustin Legacy – Regency Centers** IRWD approval letter was provided. All on-site utilities are constructed. • **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project is complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete.

					• **Flight at Tustin Legacy – Flight Venture LLC** Will-serve letter on-file. Utilities are constructed. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** IRWD approval letter was provided. All on-site utilities are constructed. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** IRWD approval letter was provided. Improvements are under construction.
(g)	Prior to the issuance of grading permits or approval of any subdivision map (except for financing and re-conveyance purposes), whichever occurs first, for development within the 100-year flood plain, grading and drainage systems shall be designed by the project developer such that all building pads would be safe from inundation from runoff from all storms up to and including the theoretical 100-year storm, to the satisfaction of the City of Tustin Building Division or the Irvine Public Works Department, as applicable. Grading permits or subdivision maps generated for financing and conveyance purposes are exempt.	Prior to the issuance of grading permits or approval of any subdivision map (except for financing and re-conveyance purposes), whichever occurs first.	Project developer	Tustin Building Division or the Irvine Public Works Department, as applicable	• **The District** Not applicable - Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Tustin Field I (Tract 16474)** Not applicable - Site not within the 100-year flood plain FEMA Map dated December 3, 2009). • **Tustin Field II (Tract 16507)** Not applicable - Site not within the 100-year flood plain FEMA Map dated December 3, 2009). • **Columbus Grove (Tract 16582)** Not applicable - Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Columbus Square (Tract 16581)** Not applicable - Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Tustin Family Campus**

					Not applicable - Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **SOCCCD (ATEP)** Not applicable - Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **RSCCD (Sheriff's Training Academy)** Not applicable - Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Village of Hope** Not applicable - Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Amalfi Apartment Homes – Irvine Company** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Anton Legacy – St. Anton Partners** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Not applicable - Site not within the 100-year flood plain FEMA Map dated December 3, 2009). • **The Village at Tustin Legacy – Regency Centers** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Orange County Animal Care Facility** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Army Reserve Center**

					Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Flight at Tustin Legacy – Flight Venture LLC** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Tustin Legacy Linear Park** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Veterans Sports Park** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Legacy Magnet Academy – TUSD** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Remaining Development** Not applicable - Site not within the 100-year flood plain (FEMA Map dated December 3, 2009).
(h)	Prior to construction of regional flood control facilities, appropriate state and federal approvals, including agreements and permits, shall be obtained. These include but are not limited to Regional Water Quality Control Board permits,	Prior to construction of regional flood control facilities.	Project developer	Public Works Department (Tustin and/or Irvine, as applicable)	• **Remaining Development** TLCP previously obtained the 401, 404, and 1602 permits for regional flood control channel improvements; however, the majority of the permit responsibilities affecting construction of Peters Canyon Channel improvements between Tustin

	including NPDES permits; Section 401 water quality certifications; Section 404 permits from the USACOE, and Section 1601 or 1603 agreements from the CDFG in a manner meeting the approval of the City of Tustin and the Irvine Public Works Department, as applicable. (As amended by Addendum)				City limits southerly to Barranca Parkway were transferred directly from TLCP to Tustin Vista Partners, LLC, a Delaware limited liability company, on May 6, 2008. Upon termination of the DDA between the City and TLCP in July 2010, the 401, 404, and 1062 permits affecting the Master Development Footprint in the City of Tustin were assigned to the City of Tustin until such time the permit(s) and/or applicable mitigation responsibilities can be assigned to subsequent developer(s) in the future. • **The District** Have received 401, 404, and 1601 permits for regional flood control channel improvements. • **SOCCCD (ATEP)** Regional permits not required for Phase 1 of project and applicable clearances have been obtained in 2011 for the balance of the site.
(i)	Prior to issuance of any grading permit or approval of any subdivision map (except for financing and conveyance purposes), for any development that is either partially or completely located within the 100-year flood plain of the Flood Insurance Rate Map, the development applicant shall submit all required documentation to the FEMA and demonstrate that the application for a Conditional Letter of Map Revision for changes to the 100-year flood plain is satisfied in a manner meeting the approval of each respective city, as applicable.	Prior to issuance of any grading permit or approval of any subdivision map (except for financing and conveyance purposes).	Project developer	Tustin Building Division or the Irvine Public Works Department, as applicable	• **The District** Site not within the 100- year flood plain (FEMA Map dated December 3, 2009). • **Tustin Field I (Tract 16474)** Site not within the 100- year flood plain (FEMA Map dated December 3, 2009). • **Tustin Field II (Tract 16507)** Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Columbus Grove (Tract 16582)** Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Columbus Square (Tract 16581)**

					Not applicable. Site not within the 100- year flood plain (FEMA Map dated February 18, 2004). • **Tustin Family Campus** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **SOCCCD (ATEP)** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **RSCCD (Sheriff's Training Academy)** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Village of Hope** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Amalfi Apartment Homes – Irvine Company** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Anton Legacy – St. Anton Partners** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **The Village at Tustin Legacy – Regency Centers** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Orange County Animal Care Facility**

					Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Army Reserve Center** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Flight at Tustin Legacy – Flight Venture LLC** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Tustin Legacy Linear Park** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Veterans Sports Park** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Legacy Magnet Academy – TUSD** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Not applicable – Site not within the 100-year flood plain (FEMA Map dated December 3, 2009). • **Remaining Development** Not applicable. Site not within the 100-year flood plain (FEMA Map dated December 3, 2009).
(j)	Prior to the approval of any applicable subdivision map (except for financing	Prior to the approval of any	Project Developer	Public Works Department	• **The District**

	and conveyance purposes), the developer - applicant shall design and construct local drainage systems for conveyance of the 10-year runoff. If the facility is in a local sump, it shall be designed to convey the 25-year runoff.	applicable subdivision map (except for financing and conveyance purposes).		(Tustin and/or Irvine, as applicable)	The required local drainage systems have been designed and completed. • **Tustin Field I (Tract 16474)** Hydrology Plan approved and improvements installed. • **Tustin Field II (Tract 16507)** Hydrology Plan approved and improvements installed. • **Columbus Square (Tract 16581)** Hydrology Plan approved and improvements installed. • **Tustin Family Campus** Hydrology Plan approved and improvements installed. • **SOCCCD (ATEP)** Hydrology Plan approved and improvements installed for Phase 1 of the project: however, a hydrology plan must be submitted and approved by the City and improvements installed in conjunction with future plans. • **RSCCD (Sheriff's Training Academy)** Hydrology Plan approved and improvements installed for the initial Sheriff's Training Facility; however, a Hydrology Plan will need to be approved and improvements installed for any future phases of development. • **Village of Hope** Hydrology Plan approved and improvements installed. • **Amalfi Apartment Homes – Irvine Company**

					Hydrology Plan approved and improvements installed. • **Anton Legacy – St. Anton Partners** Hydrology Plan approved and improvements installed. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Hydrology Plan approved and improvements installed. • **The Village at Tustin Legacy – Regency Centers** Hydrology Plan approved and improvements installed. • **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project Complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Hydrology plan approved and improvements installed. • **Tustin Legacy Linear Park** Hydrology plan approved under the original master drainage plan for Tustin Legacy. Installation occurred in accordance with the approved plans. • **Veterans Sports Park**

					Hydrology plan approved under the original master drainage plan for Tustin Legacy. Installation occurred in accordance with the approved plans. • **Legacy Magnet Academy – TUSD** The City of Tustin conducted rough grading for this project. All building permits for the construction of the facility will be issued and inspected by the State of California. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Hydrology plan approved and improvements *are complete.* • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** *Hydrology plan approved and improvements under construction.*
(k)	Prior to any grading for any new development, the following drainage studies shall be submitted to and approved by the City of Tustin, City of Irvine, and/or OCFCD, as applicable:	Prior to any grading for any new development.	Project Developer	Building Division or Public Works Department (Tustin and/or Irvine, as applicable)	
	(1) A drainage study including diversions (i.e., off-site areas that drain onto and/or through the project site), with justification and appropriate mitigation for any proposed diversion.	Prior to any grading for any new development.	Project Developer	Tustin Building Division or Public Works Department (Tustin and/or Irvine, as applicable)	• **The District** The Hydrology Plan for the project was approved and construction on a majority of the systems have been included with exception of certain Barranca storm drain channel improvements which are required by the Fifth DDA amendment and Fifth Amendment to the Infrastructure and Payment Agreement but have not yet been completed. Warner Avenue storm drain improvements were completed in 2013.

					• **Tustin Field I (Tract 16474)** The Hydrology Plan for the project was approved and improvements were installed. • **Tustin Field II (Tract 16507)** The Hydrology Plan for the project was approved and improvements were installed. • **Columbus Grove (Tract 16582)** The Hydrology Plan for the project was approved and improvements were installed. • **Columbus Square (Tract 16581)** The Hydrology plan for the project was approved and improvements were installed. • **Tustin Family Campus** Grading and drainage plans approved by the City. Construction of the project is complete. • **SOCCCD (ATEP)** Grading and drainage plans approved by the City and improvements installed for Phase 1 of project; however, grading and drainage plans will need to be submitted and approved by the City and improvements installed in conjunction with future phases. • **RSCCD (Sheriff's Training Academy)** Grading and drainage plans approved by the City and improvements installed for the initial Sheriff's Training Facility; however, grading and drainage plans will need to be approved by the City and improvements installed for any future phases. • **Village of Hope** The Hydrology Plan for the project was approved and construction is complete. • **Amalfi Apartment Homes – Irvine Company**

					Grading and drainage plans have been approved by the City and construction is complete. • **Anton Legacy – St. Anton Partners** Grading and drainage plans have been approved by the City and construction is complete. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Grading and drainage plans for the project were approved, and the grading permit was finalized in Summer 2019. • **The Village at Tustin Legacy – Regency Centers** Grading and drainage plans for the project were approved and construction is complete with exception of the acute care hospital building. • **Orange County Animal Care Facility** Rough grading and drainage plans have been approved by the City and building permits for the construction of the facility, including a precise grading permit, were issued and inspected by the County of Orange. Project was completed in late 2017 and opened to the public in Spring 2018. • **Army Reserve Center** The City of Tustin issued a rough grading permit for this project. All other building permits for the construction of the facility, including a precise grading permit, are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Grading and drainage plans were approved and the project is *complete*. • **Tustin Legacy Linear Park**

					Drainage plan approved under the original master drainage plan for Tustin Legacy. Installation for Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) occurred in accordance with the approved plans. • **Veterans Sports Park** Drainage plan approved under the original master drainage plan for Tustin Legacy. Installation occurred in accordance with the approved plans. • **Legacy Magnet Academy – TUSD** The City of Tustin conducted rough grading for this project. All building permits for the construction of the facility will be issued and inspected by the State of California. *First phase is complete.* • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Grading and drainage plans have been approved by the City and improvements are *complete.* • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** *Grading and drainage plans have been approved by the City and improvements are under construction.* • **Remaining Development** City and/or future developer(s) will assume responsibility to submit detailed information for all phases during the entitlement application phases for Neighborhoods B, D, E and G, as determined necessary.
	(2) A drainage study evidencing that proposed drainage patterns would not result in increased 100-year peak discharges within and downstream of the project limits,	Prior to any grading for any new development.	Project Developer	Tustin Building Division or Public Works Department (Tustin and/or	• **The District** The Hydrology Plan for the project was approved and improvements installed. • **Tustin Field I (Tract 16474)**

	and would not worsen existing drainage conditions at storm drains, culverts, and other street crossings including regional flood control facilities. The study shall also propose appropriate mitigation for any increased runoff causing a worsening condition of any existing facilities within or downstream of project limits. Implementation of appropriate interim or ultimate flood control infrastructure construction must be included.			Irvine, as applicable)	The Hydrology Plan for the project was approved and improvements were installed. • **Tustin Field II (Tract 16507)** The Hydrology Plan for the project was approved and improvements were installed. • **Columbus Grove (Tract 16582)** The Hydrology Plan for the project was approved and improvements were installed. • **Columbus Square (Tract 16581)** The Hydrology plans for the project have been reviewed and approved and improvements were installed. • **Tustin Family Campus** The Hydrology Plan for the project was approved and improvements were installed. • **SOCCCD (ATEP)** Grading and drainage plans approved by the City and improvements installed for Phase 1 of the project; however, grading and drainage plans will need to be submitted and approved by the City and improvements installed in conjunction with future phases. • **RSCCD (Sheriff's Training Academy)** Grading and drainage plans approved by the City and improvements installed for the initial Sheriff's Training Facility; however, grading and drainage plans will need to be approved by the City and improvements installed for any future phases. • **Village of Hope** The Hydrology Plan for the project was approved and construction is complete.

					• **Amalfi Apartment Homes – Irvine Company** Grading and drainage plans have been approved by the City and construction is complete. • **Anton Legacy – St. Anton Partners** Grading and drainage plans have been approved by the City and construction is complete • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Grading and drainage plans have been approved by the City and the grading permit was finalized in Summer 2019. • **The Village at Tustin Legacy – Regency Centers** Grading and drainage plans have been approved by the City and construction is complete. • **Orange County Animal Care Facility** The City of Tustin issued a rough grading permit for this project. All other building permits for the construction of the facility, including a precise grading permit, were issued and inspected by the County of Orange. Project was completed in late 2017 and opened to the public in Spring 2018. • **Army Reserve Center** The City of Tustin issued a rough grading permit for this project. All other building permits for the construction of the facility, including a precise grading permit, are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Grading and drainage plans have been approved by the City and project is complete. • **Tustin Legacy Linear Park**

					The City of Tustin conducted grading and drainage for Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) of the project and construction for Phase 1 and 2 of project is complete; however, grading and drainage plans will need to be submitted and approved by the City and improvements installed for any future phases. • **Veterans Sports Park** The City of Tustin conducted grading for this project and improvements *are complete*. • **Legacy Magnet Academy – TUSD** The City of Tustin conducted rough grading for this project. All building permits for the construction of the facility will be issued and inspected by the State of California. *First phase is complete.* • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Grading and drainage plans have been approved by the City and improvements are *complete.* • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** *Grading and drainage plans have been approved by the City and improvements are under construction.* • **Remaining Development** Drainage study complete. Developers will be required to submit a Hydrology Plan for compliance with the approved drainage study.
	(3) Detailed drainage studies indicating how, in conjunction with the drainage conveyance systems including applicable swales, channels, street flows, catch basins, storm drains, and flood water	Prior to any grading for any new development.	Project Developer	Tustin Building Division or Public Works Department (Tustin and/or	• **The District** The Hydrology Plan for the project was approved and improvements were installed. • **Tustin Field I (Tract 16474)**

	retarding, building pads are made safe from runoff inundation which may be expected from all storms up to and including the theoretical 100-year flood.			Irvine, as applicable)	The Hydrology Plan for the project was approved and improvements were installed**.** • **Tustin Field II (Tract 16507)** The Hydrology Plan for the project was approved and improvements were installed**.** • **Columbus Grove (Tract 16582)** The Hydrology Plan for the project was approved and improvements were installed**.** • **Columbus Square (Tract 16581)** The Hydrology Plan for the project was approved and improvements were installed**.** • **Tustin Family Campus** Grading and drainage plans have been approved by the City and improvements are complete. • **SOCCCD (ATEP)** Grading and drainage plans have been approved by the City and improvements completed for Phase 1 of the project; however, grading and drainage plans will need to be approved by the City and improvements installed for any future phases. • **RSCCD (Sheriff's Training Academy)** Grading and drainage plans have been approved by the City and improvements completed for the initial Sheriff's Training Facility; however, grading and drainage plans will need to be approved by the City and improvements installed for any future phases. • **Village of Hope** The Hydrology Plan for the project was approved and construction is complete. • **Amalfi Apartment Homes – Irvine Company**

					Grading and drainage plans have been approved by the City and construction is complete. • **Anton Legacy – St. Anton Partners** Grading and drainage plans have been approved by the City and construction is complete. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Grading and drainage plans have been approved by the City and the grading permit was finalized in Summer 2019. • **The Village at Tustin Legacy – Regency Centers** Grading and drainage plans have been approved by the City and construction is complete. • **Orange County Animal Care Facility** Rough grading and drainage plans have been approved by the City and building permits for the construction of the facility, including a precise grading permit, were issued and inspected by the County of Orange. Project was completed in late 2017 and opened to the public in Spring 2018. • **Army Reserve Center** The City of Tustin issued a rough grading permit for this project. All other building permits for the construction of the facility, including a precise grading permit, are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Grading and drainage plans have been approved by the City and the project is complete. • **Tustin Legacy Linear Park**

					The City of Tustin conducted grading and drainage for Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) of this project and construction for Phase 1 and 2 of project is complete; however, grading and drainage plans will need to be submitted and approved by the City and improvements installed for any future phases. • **Veterans Sports Park** The City of Tustin conducted grading for this project and grading is complete. • **Legacy Magnet Academy – TUSD** The City of Tustin conducted rough grading for this project. All building permits for the construction of the facility will be issued and inspected by the State of California. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Hydrology plans have been approved by the City and improvements are *complete.* • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** *Hydrology plans have been approved by the City and improvements are under construction* • **Remaining Development:** TLCP previously prepared a Hydrology study for initial phases of the project. Drainage plans were submitted for City review in Neighborhood E and will be submitted with future entitlement applications for Neighborhoods B, D, and G, as determined necessary.
(l)	Prior to approval of any subdivision map (except for financing or conveyance purposes), an agreement will be	Prior to approval of any subdivision map (except for	City of Tustin	Tustin Public Works Department,	• **The District** Agreement with OCFCD was executed on June 8, 2004, and is on file with Public Works Department.

	executed with the OCFCD that provides for the identification and contribution of a project-specific Fair Share contribution toward the construction of ultimate flood control facilities needed to accommodate build-out of the affected project. Interim flood control facilities may be considered for approval provided such facilities meet OCFCD requirements. Nothing shall preclude the City of Tustin from transferring the obligation onto other project developers within the project area.	financing or conveyance purposes).		Tustin Economic Development Department	• **Tustin Field I (Tract 16474)** Agreement with OCFCD executed on June 8, 2004. • **Tustin Field II (Tract 16507)** Agreement with OCFCD executed on June 8, 2004. • **Columbus Grove (Tract 16582)** Agreement with OCFCD was executed on June 8, 2004, and is on file with Public Works Department. • **Columbus Square (Tract 16581)** Not applicable to this site. • **SOCCCD (ATEP)** Agreements have been executed for Phase I project; however, SOCCCD may need to contribute a project-specific Fair Share toward the construction of ultimate flood control facilities needed to accommodate build-out of the affected project if the primary use of future phases is not educational, which would not be exempted from this requirement. • **RSCCD (Sheriff's Training Academy)** Agreements have been executed. • **Amalfi Apartment Homes – Irvine Company** Agreement with OCFCD was executed on June 8, 2004, and is on file with Public Works Department. • **Anton Legacy – St. Anton Partners** Agreement with OCFCD was executed on June 8, 2004, and is on file with Public Works Department. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)**

					Agreement with OCFCD executed on June 8, 2004, in addition to all related amendments, are on file with Public Works Department. • **The Village at Tustin Legacy – Regency Centers** Not applicable to this site. • **Orange County Animal Care Facility** Not applicable to this site. • **Army Reserve Center** Not applicable to this site. • **Flight at Tustin Legacy – Flight Venture LLC** Fair Share contributions have been made; however, additional contributions will need to be submitted for any future phases. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Agreement with OCFCD executed on June 8, 2004, in addition to all related amendments, are on file with Public Works Department. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Agreement with OCFCD executed on June 8, 2004, in addition to all related amendments, are on file with Public Works Department. • **Remaining Development** Any requirements are determined at each entitlement application stage as determined necessary.

Implementation Measures for Public Services and Facilities					
(m)	General The City of Tustin and the City of Irvine, each within its respective jurisdiction, shall ensure that adequate fire protection, police protection, libraries, and parks and recreation facilities (including bikeways/trails) needed to adequately serve the reuse plan area shall be provided as necessary. To eliminate any negative impact the project could have on each community's general fund, financing mechanisms including but not limited to developer fees, assessment district financing, and/or tax increment financing (in the event that a redevelopment project area is created for the site), shall be developed and used as determined appropriate by each City. Specifically;	Prior to final map recordation or building permit issuance.	Project developer	Tustin Community Development Department, Police Department, or Parks Department or the City of Irvine, and/or OCFA, as appropriate	
	(1) Applicants for private development projects shall be required to enter into an agreement with City of Tustin or the City of Irvine, as applicable, to establish a fair-share mechanism to provide needed fire and police protection services, libraries, and parks and recreation facilities (including bikeways) through the use of fee schedules, assessment district financing, Community Facility District financing, or other mechanisms as determined appropriate by each respective city.				• **The District** A DDA was entered into identifying developer responsibilities. City and Vestar have completed formation of Community Facility District (CFD) No. 07-01 for public services (Special Tax B) and for facilities (Tax A). • **Tustin Field I (Tract 16474)** A DDA was entered into identifying developer responsibilities. City and developer completed formation of CFD No. 04-01 which provided Fair Share financing of public services (Special Tax B) and facilities (Tax A). • **Tustin Field II (Tract 16507)**

					A DDA was entered into identifying developer responsibilities. City and developer completed formation of CFD No. 04-01, which provided Fair Share financing of public services (Special Tax B) and facilities (Tax A). • **Columbus Grove (Tract 16582)** A Cooperative Agreement was entered into with developer identifying developer responsibilities. City and developer completed formation of CFD 06-1, which provided Fair Share financing of public services (Special Tax B) and facilities (Tax A). An Amendment to fire master plan was approved and installation is complete. • **Columbus Square (Tract 16581)** A Cooperative Agreement was entered into with developer identifying developer responsibilities. City and developer completed formation of CFD 06-1 which provided Fair Share financing of public services (Special Tax B) and facilities (Tax A). An Amendment to fire master plan was approved and installation is complete. • **SOCCCD (ATEP)** Pursuant to the Development Agreement and Restated and Amended (Conveyance) Agreement, SOCCCD is required to construct all on-site improvements; however, the City has exempted SOCCCD from City CFD funded Tustin Legacy Infrastructure costs for the primary educational uses (Land Use Category 1) while it requires payment of its Fair Share of Infrastructure fees for non-educational uses (Land Use Category 2), and is still subject to assessments from outside utility purveyors regardless of the use of project and would be responsible for any costs that are necessary if SOCCCD proposes to modify or alter existing Tustin Legacy Infrastructure as well as landscape maintenance easements.

					• **RSCCD (Sheriff's Training Academy)** The initial Sheriff's Training Facility project is complete. RSCCD capital improvement costs for this project are paid out of Fair Share infrastructure fees. City has exempted RSCCD from City CFD funded infrastructure costs pursuant to Conveyance Agreement; however, RSCCD is still subject to assessments from outside utility purveyors if determined needed by those agencies. • **Amalfi Apartment Homes – Irvine Company** A DDA was entered into identifying developer responsibilities. Developer paid Fair Share portion of Tustin Legacy Improvement Program. Development is subject to CFD No. 13-01, which provides fair share financing of public services (Special Tax B). • **Anton Legacy – St. Anton Partners** A DDA was entered into identifying developer responsibilities. Developer paid Fair Share portion of Tustin Legacy Improvement Program. Development is subject to CFD No. 13-01, which provides Fair Share financing of public services (Special Tax B). • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** A DDA was entered into identifying developer responsibilities. City and developer completed formation of CFD No. 14-01, which provided Fair Share financing of public services (Special Tax B) and facilities (Tax A). • **The Village at Tustin Legacy – Regency Centers** A DDA was entered into identifying developer responsibilities. Developer paid Fair Share portion of Tustin Legacy Improvement Program. Development is subject to CFD 13-01 which

					provides Fair Share financing of public services (Special Tax B). • **Orange County Animal Care Facility** Not applicable to this site. • **Army Reserve Center** Not applicable to this site. • **Flight at Tustin Legacy – Flight Venture LLC** A DDA was entered into identifying developer responsibilities. Developer paid Fair Share portion of Tustin Legacy Improvement Program Development is subject to CFD 13-01, which provides Fair Share financing of public services (Special Tax B). • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** A DDA was entered into identifying developer responsibilities. Developer paid Fair Share portion of Tustin Legacy Improvement Program. Development is subject to CFD 18-01, which provides Fair Share financing of public services (Special Tax B). • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** A DDA was entered into identifying developer responsibilities. Developer *paid* Fair Share portion of Tustin Legacy Improvement Program. Development is subject to CFD 18-01, which

					provides Fair Share financing of public services (Special Tax B). • **Remaining Development** This development is currently in the planning stage. Any requirements are determined at each entitlement application stage as determined necessary. The City Council initiated establishing Community Facilities District 13-01 and CFD 18-01, special taxes to cover services such as emergency response, police, recreation program, and maintenance of streets, sidewalks, and utilities.
	(2) Recipients of property through public conveyance process, or other conveyance procedures, shall be required to mitigate any impacts of their public uses of property on public services and facilities. (As amended by Addendum)		Property recipients		• **SOCCCD (ATEP)** Pursuant to the Development Agreement and Restated and Amended (Conveyance) Agreement, SOCCCD is required to construct all on-site improvements; however, the City has exempted SOCCCD from City CFD funded Tustin Legacy Infrastructure costs for the primary educational uses (Land Use Category 1) while it requires payment of its Fair Share of Infrastructure fees for non-educational uses (Land Use Category 2), and is still subject to assessments from outside utility purveyors regardless of the use of project and would be responsible for any costs that are necessary if SOCCCD proposes to modify or alter existing Tustin Legacy Infrastructure. • **RSCCD (Sheriff's Training Academy)** The Sheriff's Training Facility project is complete. RSCCD capital improvement costs for this project are paid out of Fair Share infrastructure fees. City has exempted RSCCD from Tustin Legacy Infrastructure costs pursuant to a Settlement Agreement; however, RSCCD is still subject to assessments from outside utility purveyors. • **Village of Hope**

					Village of Hope capital improvement costs for this project are paid out of Fair Share infrastructure fees. City has exempted Village of Hope from Tustin Legacy Infrastructure costs pursuant to a Conveyance Agreement; however, Village of Hope is still subject to assessments from outside utility purveyors as determined necessary. • **Orange County Animal Care Facility** Orange County Animal Care Facility capital improvement costs for this project will be paid out of Fair Share infrastructure fees. City has exempted County of Orange from Tustin Legacy Infrastructure costs pursuant to a Cooperative Agreement; however, the County of Orange is still subject to assessments from outside utility purveyors as determined necessary. • **Army Reserve Center** Army Reserve Center capital improvement costs for this project will be paid out of Fair Share infrastructure fees. City has exempted the Army Reserve Center from Tustin Legacy Infrastructure costs pursuant to a land exchange agreement with the Secretary of the Army; however, the Army Reserve Center is still subject to assessments from outside utility purveyors as determined necessary.
(n)	The cities of Tustin and Irvine shall jointly consult and coordinate with the Orange County Parks, Program Management and Coordination Division, in preparation of trail designs for the Peters Canyon and Barranca trails within the reuse plan area. Improvements for each of these trails would be installed upon completion of flood control channel improvements and	Ongoing prior to implementation of Peters Canyon and Barranca trails.	City of Tustin and City of Irvine	Community Development Department (Tustin and/or Irvine, as applicable)	• **Tustin Field I (Tract 16474)** On-site connection to the future trails has been provided. Cash bonds for future construction upon completion of Orange County trail construction have been submitted. • **Tustin Field II (Tract 16507)** An Agreement was executed on June 8, 2004, between City and OCFCD. • **Columbus Grove (Tract 16582)**

	approval of their joint use by the OC Parks.				An Agreement was executed between City and OCFCD on June 8, 2004 and included trail improvement along Peters Canyon Channel to the north of the site. • **Columbus Square (Tract 16581)** An Agreement was executed between City and OCFCD on June 8, 2004 • **Tustin Family Campus** The Tustin Family Campus is not immediately adjacent to a trail system and did not implement a trail through the site. • **SOCCCD (ATEP)** The SOCCCD is not immediately adjacent to a trail system and did not implement a trail through the ATEP campus site. • **RSCCD (Sheriff's Training Academy)** The RSCCD is not immediately adjacent to the Peters Canyon and Barranca trail system. • **Orange County Regional Park (OC Parks)** This project is not immediately adjacent to Peters Canyon and Barranca trail system. • **Amalfi Apartment Homes – Irvine Company** This project is not immediately adjacent to Peters Canyon and Barranca trail system. • **Anton Legacy – St. Anton Partners** This project is not immediately adjacent to Peters Canyon and Barranca trail system. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)**

					An Agreement was executed between the City and OCFCD on June 8, 2004 and included trail improvements along Peters Canyon Channel. • **The Village at Tustin Legacy – Regency Centers** The project is not immediately adjacent to Peters Canyon and Barranca trail system. • **Orange County Animal Care Facility** This project is not immediately adjacent to Peters Canyon and Barranca trail system. • **Army Reserve Center** The project is not immediately adjacent to Peters Canyon and Barranca trail system. • **Flight at Tustin Legacy – Flight Venture LLC** This project is not immediately adjacent to Peters Canyon. • **Tustin Legacy Linear Park** This project is not immediately adjacent to Peters Canyon. • **Veterans Sports Park** This project is not immediately adjacent to Peters Canyon and Barranca trail system. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** This project is not immediately adjacent to Peters Canyon. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** This project is not immediately adjacent to Peters Canyon. • **Remaining Development Sites**

					The City completed the Barranca Parkway and channel improvements between Tustin Ranch Road to west of Aston Street *(now Flight Way)* in 2015. Future developers will be assigned responsibility for construction of any required remaining trails identified in the Specific Plan and/or in the Tustin Legacy *Backbone* Infrastructure Program.
(o)	Fire Protection/Emergency Medical Services Prior to the first final map recordation or building permit issuance for development (except for financing and re-conveyances purposes), the project developer could be required to enter into an agreement with the City of Tustin or City of Irvine/OCFA, as applicable, to address impacts of the project on fire services. Such agreement could include participation for fire protection, personnel and equipment necessary to serve the project and eliminate any negative impacts on fire protection services.	Prior to the first final map recordation or building permit issuance for development (except for financing and re-conveyances purposes).	Project developer	Tustin Economic Development Department and the City of Irvine	• **Tustin Field I (Tract 16474)** DDA 03-01 executed and CFD funded and no additional obligation required. • **Tustin Field II (Tract 16507)** DDA 03-03 executed and CFD funded and no additional obligation required. • **Columbus Grove (Tract 16582)** Cooperative Agreement entered into and CFD funded and no additional obligation required. • **Columbus Square (Tract 16581)** Cooperative Agreement entered into and CFD funded and no additional obligation required. • **The District** DDA entered into and CFD has been funded and no additional obligation required. • **SOCCCD (ATEP)** The SOCCCD received building permits via the Division of the State Architect for Phase I. No additional Fair Share Contribution toward Tustin Legacy Infrastructure, including fire facilities required for educational uses. Pursuant to the Development Agreement and Restated and Amended (Conveyance) Agreement, SOCCCD is required to construct all on-site improvements; however, the City has exempted SOCCCD from City CFD funded Tustin Legacy Infrastructure costs for

					the primary educational uses (Land Use Category 1) while it requires payment of its Fair Share of Infrastructure fees for non-educational uses (Land Use Category 2), including for Fire Services, and is still subject to assessments from outside utility purveyors regardless of the use of project and would be responsible for any costs that are necessary if SOCCCD proposes to modify or alter existing Tustin Legacy Infrastructure. • **RSCCD (Sheriff's Training Academy)** The RSCCD received building permits via the Division of the State Architect for the Sheriff's Training Facility project. No additional Fair Share Contribution toward Tustin Legacy Infrastructure, including fire facilities required for educational uses. • **Amalfi Apartment Homes – Irvine Company** DDA 2012-001 executed and Fair Share contribution has been made. CFD 13-01 applicable to this development. • **Anton Legacy – St. Anton Partners** DDA 2012-002 executed and Fair Share contribution has been made. CFD 13-01 applicable to this development. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** DDA 2013-003 executed and CFD 14-01 (Tax A) has been funded and no additional obligation required. CFD 14-01 (Tax B) is ongoing. • **The Village at Tustin Legacy – Regency Centers** DDA executed and Fair Share contribution has been made. CFD 13-01 applicable to this development. • **Orange County Animal Care Facility**

					The City of Tustin has a cooperative agreement with the County of Orange. Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. Project is complete. • **Army Reserve Center** The City of Tustin has a land exchange agreement with the Secretary of the Army. Building permits and related inspections for construction of the facility are the responsibility of the federal government. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** DDA executed and Fair Share contribution made. CFD 13-01 is applicable to this development. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** DDA executed and Fair Share contribution made. CFD 18-01 is applicable to this development. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** DDA executed and Fair Share contribution *made.* CFD 18-01 is applicable to this development. • **Remaining Development**

					Future developers will be required to provide their Fair Share Contribution towards Tustin Legacy Infrastructure, including fire facilities; to address necessary fire protection and emergency medical service needs at Tustin Legacy.

(p)	Prior to issuance of building permits, the project developer shall work closely with the OCFA to ensure that adequate fire protection measures are implemented in the project.	Prior to issuance of building permits.	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** Fire master plan approved by OCFA. Installation complete. • **Tustin Field I (Tract 16474)** Fire master plan approved by OCFA. Installation complete. • **Tustin Field II (Tract 16507)** Fire master plan approved by OCFA. Installation complete. • **Columbus Grove (Tract 16582)** Fire master plan reviewed and approved by OCFA. Installation complete. • **Columbus Square (Tract 16581)** Fire master plan reviewed and approved by OCFA. Installation complete. • **Tustin Family Campus** Fire master plan reviewed and approved by OCFA. Installation complete. • **SOCCCD (ATEP)** Fire master plan for Phase 1 of project approved by OCFA and installation complete; however. a complete fire master plan for future phases will need to be reviewed and approved by OCFA. • **RSCCD (Sheriff's Training Academy)** Fire master plan approved by OCFA for the Sheriff's Training Facility project and installation complete; however, OCFA will need to review and approve any future phases of development.

					• **Village of Hope** Fire master plan reviewed and approved by OCFA. Installation complete. • **Amalfi Apartment Homes – Irvine Company** Fire master plan reviewed and approved by OCFA. Installation complete. • **Anton Legacy – St. Anton Partners** Fire master plan reviewed and approved by OCFA. Installation complete. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Fire master plan reviewed and approved by OCFA. Installation complete. • **The Village at Tustin Legacy – Regency Centers** Fire master plan reviewed and approved by OCFA. Installation complete. • **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project complete. • **Flight at Tustin Legacy – Flight Venture LLC** Fire master plan reviewed and approved by OCFA. Installation complete. • **Tustin Legacy Linear Park** Not applicable to this site.

					• **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Fire master plan reviewed and approved by OCFA. *Installation complete.* • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Fire master plan reviewed and approved by OCFA. *Installation is under construction.* • **Remaining Development** Developers will be required to ensure fire protection measures are implemented with each development, as applicable.
(q)	Prior to issuance of building permits for phased projects, the project developer shall submit a construction phasing plan to the OCFA demonstrating that emergency vehicle access is adequate.	Prior to issuance of building permits for phased projects.	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** Fire master plan approved by OCFA and all requirements installed. • **Tustin Field I (Tract 16474)** Fire master plan approved by OCFA and all requirements installed. • **Tustin Field II (Tract 16507)** Fire master plan approved by OCFA and all requirements installed. • **Columbus Grove (Tract 16582)** Fire master plan approved by OCFA and all requirements installed. • **Columbus Square (Tract 16581)** Fire master plan approved by OCFA and all requirements installed.

					• **Tustin Family Campus** Fire master plan approved by OCFA and all requirements installed. • **SOCCCD (ATEP)** Fire master plan for Phase 1 of project reviewed and approved by OCFA. Installation complete. However, a complete fire master plan for future phases will need to be reviewed and approved by OCFA. • **RSCCD (Sheriff's Training Academy)** Fire master plan reviewed and approved by OCFA for the initial Sheriff's Training Facility project and installation complete; however, OCFA will need to review and approve any future development plans. • **Village of Hope** Fire master plan approved by OCFA and all requirements installed. • **Amalfi Apartment Homes – Irvine Company** Fire master plan approved by OCFA and installation is complete. • **Anton Legacy – St. Anton Partners** Fire master plan approved by OCFA and installation is complete. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Fire master plan for the development has been approved by OCFA and installation is complete. • **The Village at Tustin Legacy – Regency Centers** Fire master plan reviewed and approved by OCFA and installation is complete.

					• **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project Complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Fire master plan reviewed and approved by OCFA. Installation 1 complete. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Fire master plan reviewed and approved by OCFA. *Project complete.* • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Fire master plan reviewed and approved by OCFA. Installation *under construction.* • **Remaining Development** Future developer(s) will be required to address adequate emergency vehicle access with each development.
(r)	Prior to the issuance of building permits, the project developer shall submit a fire hydrant location plan for the review and approval of the Fire Chief and ensure	Prior to issuance of building permits.	Project developer	Community Development Department (Tustin and/or	• **The District** Fire master plan approved by OCFA and all requirements installed.

	that fire hydrants capable of flows in amounts approved by the OCFA are in place and operational to meet fire flow requirements.			Irvine, as applicable)	• **Tustin Field I (Tract 16474)** Fire master plan approved by OCFA and all requirements installed. • **Tustin Field II (Tract 16507)** Fire master plan approved by OCFA and all requirements installed. • **Columbus Grove (Tract 16582)** Fire master plan approved by OCFA and all requirements installed. • **Columbus Square (Tract 16581)** Fire master plan approved by OCFA and all requirements installed. • **Tustin Family Campus** Fire master plan approved by OCFA and all requirements installed. • **SOCCCD (ATEP)** Fire master plan for Phase 1 of project reviewed and approved by OCFA. Installation complete. However, a complete fire master plan for future phases will need to be reviewed and approved by OCFA. • **RSCCD (Sheriff's Training Academy)** Fire master plan reviewed and approved by OCFA for the Sheriff's Training Facility and installation complete; however, OCFA will need to review and approve any future development plans. • **Village of Hope** Fire master plan approved by OCFA and all requirements installed.

					• **Amalfi Apartment Homes – Irvine Company** Fire master plan approved by OCFA and installation is complete. • **Anton Legacy – St. Anton Partners** Fire master plan approved by OCFA and installation is complete. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Fire master plan approved by OCFA and installation is complete. • **The Village at Tustin Legacy – Regency Centers** Fire master plan reviewed and approved by OCFA and installation is complete. • **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project Complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Fire master plan reviewed and approved by OCFA. Installation *complete.* • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)**

					Fire master plan reviewed and approved by OCFA. *Project complete.* • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Fire master plan reviewed and approved by OCFA. *Installation under construction.* • **Remaining Development** Future developer(s) will be required to address any specific requirements with each development at the building permit application stage, as applicable.
(s)	<u>Police Protection</u> Prior to issuance of building permits, the project developer shall work closely with the respective Police Department to ensure that adequate security precautions are implemented in the project.	Prior to issuance of building permits.	Project developer	Community Development Department (Tustin and / or Irvine, as applicable)	• **The District** All plans reviewed and approved by the Tustin Police Department. • **Tustin Field I (Tract 16474)** All plans reviewed and approved by the Tustin Police Department. • **Tustin Field II (Tract 16507)** All plans reviewed and approved by the Tustin Police Department. • **Columbus Grove (Tract 16582)** All plans reviewed and approved by the Tustin Police Department. • **Columbus Square (Tract 16581)** All plans reviewed and approved by the Tustin Police Department. • **SOCCCD (ATEP)** The Tustin Police Department reviewed the Phase 1 project; however, the Tustin Police Department will need to review all future phases.

					• **RSCCD (Sheriff's Training Academy)** All plans reviewed and approved by the Tustin Police Department. • **Village of Hope** All plans reviewed and approved by Tustin Police Department. • **Amalfi Apartment Homes – Irvine Company** All plans reviewed and approved by the Tustin Police Department. • **Anton Legacy – St. Anton Partners** All plans reviewed and approved by the Tustin Police Department. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** All plans reviewed and approved by the Tustin Police Department. • **The Village at Tustin Legacy – Regency Centers** All plans reviewed and approved by Tustin Police Department. • **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project Complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** All plans reviewed and approved by the Tustin Police Department.

					• **Tustin Legacy Linear Park** All plans for Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) reviewed and approved by the Tustin Police Department. • **Veterans Sports Park** All plans reviewed and approved by Tustin Police Department. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** All plans reviewed and approved by Tustin Police Department. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** All plans reviewed *and approved* by Tustin Police Department. • **Remaining Development** Developer(s) will be required to address any specific requirements with each development at the entitlement application stage, as applicable.
(t)	<u>Schools</u> Prior to the issuance of building permits, the project developer shall submit to the respective City proof of payment of appropriate school fees adopted by the applicable school district pursuant to Government Code Section 65995. Alternatively, a project developer may enter into a mutual agreement with an applicable school district to provide alternative mitigation that addresses student generation increases. (As amended by Addendum)	Prior to the issuance of building permits.	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** School fees were collected prior to issuance of building permits. • **Tustin Field I (Tract 16474)** School fees were collected prior to issuance of building permits. • **Tustin Field II (Tract 16507)** School fees were collected prior to issuance of building permits. • **Columbus Grove (Tract 16582)** School fees were collected prior to issuance of building permits.

					• **Columbus Square (Tract 16581)** School fees were collected prior to issuance of building permits. • **SOCCCD (ATEP)** The project is a school district and no fees were required. Future phases involving non-educational users are subject to school fees. • **RSCCD (Sheriff's Training Academy)** The project is part of a school district and no fees were required. • **Amalfi Apartment Homes – Irvine Company** School fees were collected prior to issuance of building permits. • **Anton Legacy – St. Anton Partners** School fees were collected prior to issuance of building permits. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** School fees were collected prior to issuance of building permits. • **The Village at Tustin Legacy – Regency Centers** School permit fees were collected with issuance of each permit. • **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project Complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete.

					• **Flight at Tustin Legacy – Flight Venture LLC** School fees were collected prior to issuance of each building permit. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** School fees were collected prior to issuance of each building permit. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** School fees will be collected with issuance of each building permit. • **Remaining Development** Developer(s) are required to pay school fees for each development, as applicable.
(u)	<u>Parks and Recreation</u> Prior to the first final map recordation (except for financing and re-conveyance purposes) or building permit issuance for development within the City of Tustin portion of the site, the project developer shall be required to provide evidence of compliance with all requirements and standards of the City of Tustin Park Code.	Prior to the first final map recorda-tion (except for financing and re-conveyance purposes) or building permit issuance.	Project developer	Tustin Community Development Department and Parks and Recreation Department	• **Tustin Field I (Tract 16474)** A recreation building and park facilities were constructed within a one-acre site within the project (developer was given credit for these improvements) and additional Park in-lieu fees were also paid. Developer also made a Fair Share Contribution towards Tustin Legacy Infrastructure, which included public parks at Tustin Legacy. • **Tustin Field II (Tract 16507)** A recreation pool area and park facilities were constructed within a one-acre site within the project (developer was given credit for these improvements) and additional Park in-lieu of fees were paid. Developer also made a Fair Share Contribution

					towards Tustin Legacy Infrastructure, which included public parks at Tustin Legacy. • **Columbus Grove (Tract 16582)** Park facilities were constructed within the project (developer was given a credit for these improvements) and additional Park – in lieu fees paid and bonds submitted (on file with City Clerk). Developer also made a Fair Share Contribution towards Tustin Legacy Infrastructure, which included public parks at Tustin Legacy. • **Columbus Square (Tract 16581)** Park facilities were constructed within the project (developer was given credit for these improvements) and additional Park– in-lieu fees paid and bonds submitted. Developer also made a Fair Share Contribution towards Tustin Legacy Infrastructure, which included public parks at Tustin Legacy. • **SOCCCD (ATEP)** The project did not require a contribution to park facilities for educational uses. However, any non-educational uses will be required to make a Fair Share Contribution towards Tustin Legacy Infrastructure, which includes public parks at Tustin Legacy. • **RSCCD (Sheriff's Training Academy)** The project did not require a contribution to park facilities. • **Amalfi Apartment Homes – Irvine Company** Recreation facilities and pool area were constructed pursuant to the DDA. Fair Share contribution towards Tustin Legacy Infrastructure has been met.

					• **Anton Legacy – St. Anton Partners** A 4.7-acre park (Victory Park) was constructed in addition to recreation and pool area pursuant to the DDA. The park was conveyed to the City after completion. Fair Share contribution towards Tustin Legacy Infrastructure has been met. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** A 6.1-acre private focal park with public access was constructed in addition to recreation and pool area pursuant per Condition 11.2 of Resolution No. 14-14 and DDA 2013-03. • **The Village at Tustin Legacy – Regency Centers** This project did not require a contribution to park facilities. Fair Share contribution towards Tustin Legacy Infrastructure has been met. • **Orange County Animal Care Facility** This project did not require a contribution to park facilities. • **Army Reserve Center** This project did not require a contribution to park facilities. • **Flight at Tustin Legacy – Flight Venture LLC** This project did not require a contribution to park facilities. Fair Share contribution towards Tustin Legacy Infrastructure has been met. • **Tustin Legacy Linear Park** This project did not require a contribution to park facilities. • **Veterans Sports Park** This project did not require a contribution to park facilities.

					• **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Recreation facilities and pool area were constructed pursuant to the DDA. Fair Share contribution towards Tustin Legacy Infrastructure has been met. • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Publicly accessible common areas, recreation facilities and the pool area will be constructed pursuant to Resolution 19-54 and the DDA. Fair Share contribution towards Tustin Legacy Infrastructure *has been met*. • **Remaining Development** Future developer(s) will be required to comply with all requirements and standards of the City of Tustin Quimby Act ordinance with each development, as applicable. Developers will also be required to make a Fair Share Contribution towards Tustin Legacy Infrastructure, which includes public parks (with a credit for any Quimby Act dedications or fees paid).
(v)	Prior to the first final map recordation or building permit issuance within the City of Irvine portion of the site, the project developer shall be required to provide evidence of compliance with all requirements and standards of the City of Irvine Park Code.	Prior to the first final map recorda-tion (except for financing and re-conveyance purposes) or building permit issuance.	Project developer	Irvine Community Development Department	Not applicable to any development projects at Tustin Legacy in Tustin.
(w)	Prior to the first concept plan for tentative tract map in the City of Tustin, the project developer shall file a petition for the creation of a landscape maintenance district for the project area with the City of Tustin. The district shall	Prior to the first concept plan for tentative tract map.	Project developer	Tustin Public Works Department; Tustin Economic Development Department	• **The District** Landscaped Maintenance obligations of the developer immediately adjacent to the project are secured by a landscape maintenance agreement (parkways adjacent to the site) and maintenance conditions have been included and recorded with

	include public neighborhood parks, landscape improvements, and specific trails (Barranca only), the medians in arterials, or other eligible items mutually agreed to by the petitioner and the City of Tustin. In the event that a district is not established prior to issuance of the first building permit, maintenance of items mentioned above shall be the responsibility of a community association.				CC&Rs. City and developer have completed formation of CFD No. 07-01 which imposes a public service assessment for maintenance of medians, parks, landscaping and other public services. • **Tustin Field I (Tract 16474)** Landscaped Maintenance obligations of the developer immediately adjacent to the project are secured by a landscape maintenance agreement (parkways adjacent to the site) and maintenance conditions have been included and recorded with CC&Rs. City and developer have completed formation of CFD No. 04-01 which imposes a public service assessment for maintenance of medians, parks, landscaping and other public services. • **Tustin Field II (Tract 16507)** Landscaped Maintenance obligations of the developer immediately adjacent to the project are secured by a landscape maintenance agreement (parkways adjacent to the site) and maintenance conditions have been included and recorded with CC&Rs. City and developer have completed formation of CFD No. 04-01 which imposes a public service assessment for maintenance of medians, parks, landscaping and other public services. • **Columbus Grove (Tract 16582)** Landscaped Maintenance obligations of the developer immediately adjacent to the project are secured by a landscape maintenance agreement (parkways adjacent to the site) and maintenance conditions have been included and recorded with CC&Rs. City and developer have completed formation of CFD No. 06-01 which imposes a public service assessment for maintenance of medians, parks, landscaping and other public services.

					• **Columbus Square (Tract 16581)** Landscape Maintenance obligations of the developer immediately adjacent to the project are secured by a landscape maintenance agreement (parkways adjacent to the site) and maintenance conditions have been included and recorded with CC&Rs. City and developer have completed formation of CFD No. 06-01 which imposes a public service assessment for maintenance of medians, parks. Landscaping, and other public services (Special Tax B). • **Tustin Family Campus** Orange County Social Services is responsible for maintenance of parkway landscaping adjacent to their property as a condition of the City's design review approval of their project and subject to the Agreement between the City and County for the Tustin Family Center. Public agencies have been determined by City Council policy to be exempt from any CFD special taxes for public services provided the uses on said sites are public uses. • **SOCCCD (ATEP)** SOCCCD will be responsible for maintenance of parkway landscaping adjacent to their property as a condition of the City's concept plan and design review approvals of their project (by individual phases) and subject to the Conveyance Agreement between the City and SOCCCD. A phase 1 Landscape Maintenance Agreement has been entered into. Public agencies have been determined by City Council policy to be exempt from any CFD special taxes for public services provided the uses on said sites are public uses (Land Use Category 1); however, an obligation for Land Use Category 2 uses to contribute to any public service costs for maintenance of medians, parks, landscaping and other public services will be required.

					• **RSCCD (Sheriff's Training Academy)** RSCCD will be responsible for maintenance of parkway landscaping adjacent to their property as condition of the City's reviews and approvals. Public agencies have been determined by City Council policy to be exempt from any CFD special taxes for public services provided the uses on said sites are public uses. • **Amalfi Apartment Homes – Irvine Company** Landscape Maintenance obligations of the developer immediately adjacent to the project are secured by a landscape maintenance agreement (parkways adjacent to the site). Development is subject to CFD No. 13-01, which provides Fair Share financing of public services. • **Anton Legacy – St. Anton Partners** Landscape Maintenance obligations of the developer immediately adjacent to the project are secured by a landscape maintenance agreement (parkways adjacent to the site). Development is subject to CFD No. 13-01, which provides Fair Share financing of public services. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Landscape Maintenance obligations of the developer immediately adjacent to the project are secured by a landscape maintenance agreement (parkways adjacent to the site). City and developer completed formation of CFD No. 14-01 for financing of public services. • **The Village at Tustin Legacy – Regency Centers** Landscape Maintenance obligations of the developer immediately adjacent to the project are secured by a landscape maintenance agreement. Development is subject to CFD No. 13-01, which provides Fair Share financing of public services.

					• **Orange County Animal Care Facility** The City of Tustin has a cooperative agreement with the County of Orange. County of Orange is responsible for the maintenance of parkway landscaping adjacent to their property as condition of the City's reviews and approvals. Public agencies have been determined by City Council policy to be exempt from any CFD special taxes for public services provided the uses on said sites are public uses. • **Army Reserve Center** The City of Tustin has a land exchange agreement with the Secretary of the Army. Public agencies have been determined by City Council policy to be exempt from any CFD special taxes for public services provided the uses on said sites are public uses. • **Flight at Tustin Legacy – Flight Venture LLC** Landscape Maintenance Agreement was executed with the DDA. Development is subject to CFD No. 13-01, which provides Fair Share financing of public services. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Landscape Maintenance Agreement was executed with the DDA. Development is subject to CFD No. 18-01, which provides Fair Share financing of public services.

					• ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Landscape Maintenance Agreement *was* executed at the close of escrow. Development is subject to CFD No. 18-01, which provides Fair Share financing of public services. • **Remaining Development** Developer(s) will be required to be responsible for maintenance of parkway landscaping adjacent to development sites as a condition imposed at the entitlement stage. Further, each project will be required to participate in any future CFD, including CFD 13-01 and CFD 18-01, imposed on the property to cover infrastructure and for maintenance of medians, parks, landscaping and other public services as a condition imposed at the entitlement stage.
(x)	Prior to approval of any subdivision map (except for financing or conveyance purposes), an agreement will be executed with the following agencies for the associated trail improvements: a. County Parks — identification of a project-specific Fair Share contribution toward the installation of necessary regional bikeway trail improvements within Peters Canyon Channel, to be installed in conjunction with the County of Orange's other channel improvements;	Prior to approval of any subdivision map (except for financing or conveyance purposes).	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **Tustin Field I (Tract 16474)** City entered into an Agreement with the OCFCD and Orange County Parks executed on June 8, 2004 (on file with PW), which addresses these obligations. Developer has also made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement associated with CFD 04-01. • **Tustin Field II (Tract 16507)** City entered into an Agreement with the OCFCD and Orange County Parks executed on June 8, 2004 (on file with PW), which addresses these obligations. Developer has also made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement associated with CFD 04-01.

					• **Columbus Grove (Tract 16582)** City entered into an Agreement with the OCFCD and Orange County Parks executed on June 8, 2004 (on file with PW), which addresses these obligations. Developer has also made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement associated with CFD 06-01. • **Columbus Square (Tract 16581)** City entered into an Agreement with the OCFCD and Orange County Parks executed on June 8, 2004 (on file with PW), which addresses these obligations. Developer has also made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement associated with CFD 06-01. • **SOCCCD (ATEP)** Requirement fulfilled for Phase I project. Any future non-educational users (Land Use Category 2) will be subject to a project specific Fair Share Contribution toward the installation of necessary regional bikeway trail improvements included in the Tustin Legacy Infrastructure Program. • **RSCCD (Sheriff's Training Academy)** Not applicable. Public uses exempt by City Council policy from a Fair Share contribution towards these improvements, so no agreement necessary. • **Village of Hope** Not applicable. Public and non-profit uses exempt by City Council policy from a Fair Share contribution towards these improvements, so no agreement necessary.

					• **Amalfi Apartment Homes – Irvine Company** City entered into an Agreement with the OCFCD and Orange County Parks executed on March 5, 2013 (on file with PW), which addresses these obligations. Developer has made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 13-01. • **Anton Legacy – St. Anton Partners** City entered into an Agreement with the OCFCD and Orange County Parks executed on March 5, 2013 (on file with PW), which addresses these obligations. Developer has made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 13-01. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Agreement with OCFCD executed on June 8, 2004, in addition to all related amendments, are on file with Public Works Department. Developer has made their Fair Share contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 14-01. • **The Village at Tustin Legacy – Regency Centers** Developer has made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 13-01. • **Orange County Animal Care Facility** Not applicable. Public and non-profit uses exempt by City Council policy from a Fair Share contribution towards these improvements, so no agreement is necessary.

					• **Army Reserve Center** Not applicable. Public and non-profit uses exempt by City Council policy from a Fair Share contribution towards these improvements, so no agreement is necessary. • **Flight at Tustin Legacy – Flight Venture LLC** Developer has made their Fair Share contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 13-01. • **Tustin Legacy Linear Park** Not applicable. Public and non-profit uses exempt by City Council policy from a Fair Share contribution towards these improvements, so no agreement is necessary. • **Veterans Sports Park** Not applicable. Public and non-profit uses exempt by City Council policy from a Fair Share contribution towards these improvements, so no agreement is necessary. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Agreement with OCFCD executed on June 8, 2004, in addition to all related amendments, are on file with Public Works Department. Developer has made their Fair Share contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 18-01. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Agreement with OCFCD executed on June 8, 2004, in addition to all related amendments, are on file with Public Works Department. Developer *has made their* Fair Share contribution towards the

					Tustin Legacy Infrastructure Program. Development is subject to CFD No. 18-01. • **Remaining Development** Future developer(s) will be required to make a Fair Share Contribution towards these improvements, as applicable, and at future entitlement application stages of the project, the requirement will also be imposed.
	b. City of Tustin — the identification of a project-specific Fair Share contribution toward the installation of Class II bicycle trails through the project site. For the area of the site northeast of Irvine Center Drive, a separate agreement would be required to ensure the provision of a bikeway right-of-way easement, and design and construction of a bike trail along the SCRRA/OCTA rail tracks from Harvard Avenue westerly to the Peters Canyon Channel. In addition, project developers of the areas of the site southeast of the Peters Canyon Channel would need to accommodate access to both the Peters Canyon Trail and the trail adjacent to the SCRRA/OCTA tracks in any project site design including dedication of any necessary recreational trail easements;	Prior to the first final map recordation (except for financing and re-conveyance purposes) or building permit issuance.	Project developer	Tustin Community Development Department and/or SCRRA/OCTA, as appropriate	• **The District** City entered into DDA with developer which addresses these obligations. Developer has also made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement associated with CFD 07-01. Developer has completed an off-site bikeway trail on the north side of Barranca Parkway between Jamboree Road and Tustin Ranch Road. • **Tustin Field I (Tract 16474)** City entered into a DDA with developer, which addresses these obligations. Developer has also made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement associated with CFD 04-01. The specific Bike trail on the north side of the project was designed and approved. The public bid was awarded December, 2005 and the project was completed in September 2006. • **Tustin Field II (Tract 16507)** City entered into a DDA with developer, which addresses these obligations. Developer has also made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement

					associated with CFD 04-01. The specific on-site pedestrian access from the site to the trail along Peters Canyon and *the entirety of the Peters Canyon Trail within Tustin is complete*. The portion within Irvine is a Moffett Meadows and Marble Mountain (Lennar) responsibility that was imposed on this developer by the City of Irvine with their entitlements. • **Columbus Grove (Tract 16582)** City entered into a Cooperative Agreement with developer, which addresses the obligations. Developer has also made their current Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement associated with CFD 06-01. Responsibility for actual construction of the trail on the North side of Tustin Field 1 and on the west side of Tustin Field 1 and II has been placed on others. • **Columbus Square (Tract 16581)** City entered into a Cooperative Agreement with developer, which addresses these obligations. Developer has also made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement associated with CFD 06-01. Responsibility for actual construction of the trail on the North side of Tustin Field 1 and on the west sided of Tustin Field 1 and II has been placed on others. • **SOCCCD (ATEP)** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. Since Phase 1 is a public use, no obligations required. Any future non-educational users (Land

					Use Category 2) will be subject to a project-specific Fair Share Contribution toward the installation of Class II bicycle trails through the larger Tustin Legacy project and any applicable CFD assessments for said improvements. • **RSCCD (Sheriff's Training Academy)** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. The RSCCCD project is a public use, no obligations required. • **Amalfi Apartment Homes – Irvine Company** City executed a DDA with the developer that addresses these obligations. Developer has also made their current Fair Share Contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 13-01. • **Anton Legacy – St. Anton Partners** City executed a DDA with the developer that addresses these obligations. Developer has also made their current Fair Share Contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 13-01. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** City entered into a DDA with the developer, which addresses these obligations. Developer has made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program and entered into an Acquisition and Funding Agreement associated with CFD 14-01. • **The Village at Tustin Legacy – Regency Centers** City executed a DDA with the developer that addresses these obligations. Developer has also

					made their current Fair Share Contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 13-01. • **Orange County Animal Care Facility** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. No obligations required. • **Army Reserve Center** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. No obligations required. • **Flight at Tustin Legacy – Flight Venture LLC** City executed a DDA with the developer that addresses these obligations. Developer has made their Fair Share Contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 13-01. • **Tustin Legacy Linear Park** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. No obligations required. • **Veterans Sports Park** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. No obligations required.

					• **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** City executed a DDA with the developer that addresses these obligations. Developer has made their Fair Share contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 18-01. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** City executed a DDA with the developer that addresses these obligations. Developer *has made their* Fair Share contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 18-01. • **Remaining Development** Future developer(s) will be responsible for any required Fair Share Contribution towards the Tustin Legacy Infrastructure Program as a condition also imposed at the entitlement stage. Further, projects will be required to participate in any future CFD imposed on the property(ies) to cover infrastructure, maintenance and public services as a condition imposed at the entitlement stage, as applicable.
	c. City of Tustin — the identification of a project specific Fair Share contribution toward installation of Class I bikeway trail improvements northerly of Barranca Parkway after completion of the Barranca Channel improvements. For proposed developments adjacent to Barranca Channel, separate agreements would be required to ensure the establishment of a	Prior to the first final map recorda-tion (except for financing and re-conveyance purposes) or building permit issuance.	Project developer	Tustin Community Development Department	• **The District** A Fair Share Contribution was made by the developer as condition of the DDA and funding provided partially from CFD 07-01 proceeds. Class I bikeway along Barranca Parkway was constructed by the project developer. • **Tustin Field I (Tract 16474)** A Fair Share Contribution was made by the developer as condition of the DDA and with CFD 04-01. Actual improvements constructed by others.

	bikeway right-of-way easement between Jamboree Road and Red Hill Avenue.				• **Tustin Field II (Tract 16507)** A Fair Share Contribution was made by the developer as condition of the DDA and with CFD 04-01. Actual improvements constructed by others. • **Columbus Grove (Tract 16582)** A Fair Share Contribution was made by the developer as condition of the DDA and with CFD 04-01. Actual improvements constructed by others. • **Columbus Square (Tract 16581)** A Fair Share Contribution was made by the developer as condition of the DDA and with CFD 04-01. Actual improvements constructed by others. • **Tustin Family Campus** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. Since Tustin Family Campus is a public use, no obligations required. • **SOCCCD (ATEP)** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. Since Phase 1 is a public use, no obligations required. Any future non-educational users (Land Use Category 2) will be subject to a project-specific Fair Share Contribution toward the improvements through the larger Tustin Legacy project and any applicable CFD assessments for said improvements. • **RSCCD (Sheriff's Training Academy)** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin

					Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. The RSCCCD project is a public use, no obligations required. • **Village of Hope** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. The Village of Hope project is a public use, no obligations required. • **Amalfi Apartment Homes – Irvine Company** A Fair Share Contribution was made by the developer as condition of the DDA. Development is also subject to CFD No. 13-01. • **Anton Legacy – St. Anton Partners** A Fair Share Contribution was made by the developer as condition of the DDA. Development is also subject to CFD No. 13-01. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** A Fair Share Contribution was made by developer as a condition of the DDA and with CFD 14-01. • **The Village at Tustin Legacy – Regency Centers** A Fair Share Contribution was made by the developer as condition of the DDA. Development is also subject to CFD No. 13-01. • **Orange County Animal Care Facility** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin

					Legacy CFD's. The Animal Care Facility project is a public use, no obligations required. • **Army Reserve Center** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. The Army Reserve Center project is a public use, no obligations required. • **Flight at Tustin Legacy – Flight Venture LLC** A Fair Share Contribution has been made by the developer as condition of the DDA. Development is also subject to CFD No. 13-01. • **Tustin Legacy Linear Park** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. The Tustin Legacy Linear Park project is a public use, no obligations required. • **Veterans Sports Park** Public uses are exempt by City Council policy from Fair Share Contributions towards the Tustin Legacy Infrastructure Program and any infrastructure assessments imposed by Tustin Legacy CFD's. The Veterans Sports Park project is a public use, no obligations required. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** City executed a DDA with the developer that addresses these obligations. Developer has made their Fair Share contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 18-01.

					• ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** City executed a DDA with the developer that addresses these obligations. Developer *has made* their Fair Share contribution towards the Tustin Legacy Infrastructure Program. Development is subject to CFD No. 18-01. • **Remaining Development** Future developer(s) will be required to be responsible for a Fair Share contribution towards construction of Tustin Legacy Infrastructure which will include trails and any required CFD assessments at the entitlement application stage, as applicable.
Mitigation Measures for Aesthetics					
Vis-1	In conjunction with any zoning ordinance amendments to implement the reuse plan in Tustin or Irvine, an urban design plan shall be adopted to provide for distinct and cohesive architectural and landscape design, features and treatments, as well as harmony with adjacent landscaping. The urban design plan shall have the following elements: • landscaping concept and master signage plan; • design review and approval process; • limits on development intensity for each specific land use; • limits on height of structures and lot coverage; • minimum site building setbacks; • minimum on-site landscaping requirements;	Prior to the first final map recordation (except for financing and re-conveyance purposes) or building permit issuance.	City of Tustin and City of Irvine	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** Included in construction plans and installation is complete. • **Tustin Field I (Tract 16474)** Included in construction plans and installation is complete. • **Tustin Field II (Tract 16507)** Included in construction plans and installation is complete. • **Columbus Grove (Tract 16582)** Included in construction plans and installation is complete. • **Columbus Square (Tract 16581)** Included in construction plans and installation is complete.

	• buffering requirements, including berms, masonry walls, and landscaping; • lighting regulations, including regulations ensuring that exterior lighting does not • negatively impact surrounding property; • screening regulations for mechanical equipment and outside storage; and, • site signage requirements, including sign permit approval.				• **SOCCCD (ATEP)** Phase 1 of the project was reviewed for compliance with the requirements of the MCAS Tustin Specific Plan; however, all future phases will need to be reviewed for compliance with the MCAS Tustin Specific Plan. • **Village of Hope** Included in construction plans and installation is complete. • **Tustin Family Campus** Included in construction plans and installation is complete. • **RSCCD (Sheriff's Training Academy)** The Sheriff's Training Facility project was reviewed for compliance with the requirements of the MCAS Tustin Specific Plan, and any future development phases will also be subject to compliance with the MCAS Tustin Specific Plan. • **Amalfi Apartment Homes – Irvine Company** Included in construction plans and installation is complete. • **Anton Legacy – St. Anton Partners** Included in construction plans and installation is complete. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Included in the entitlement and construction plans and installation is complete. • **The Village at Tustin Legacy – Regency Centers** Included in the entitlement and construction plans and installation is complete.

					• **Orange County Animal Care Facility** The City reviewed and approved a Concept Plan for the Animal Care Facility project. Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project Complete. • **Army Reserve Center** The Army Reserve Center project was reviewed for compliance with the requirements of the MCAS Tustin Specific Plan, and any future development phases will also be subject to compliance with the MCAS Tustin Specific Plan. Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Included in the construction plans and installation is complete. • **Tustin Legacy Linear Park** Included in the entitlement and construction plans. Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) of this project is complete, however, all future phases will need to be reviewed for compliance with the Tustin Legacy Specific Plan. • **Veterans Sports Park** Included in the entitlement and construction plans and installation is *complete*. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Included in the entitlement and construction plans and installation is *complete*.

					• ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Included in the entitlement plans *and construction plans, and installation is under construction* • **Remaining Development** Future developer(s) will be responsible for any required urban design plan including cohesive architectural and landscape design.
Mitigation Measures for Cultural and Paleontological Resources					
Hist-1	Historic American Building Survey (HABS) - DON will complete the appropriate recordation for hangars 28 and 29 and the discontiguous historic district prior to conveyance of any property within the discontiguous historic district and shall ensure that copies of the recordation are made available to SHPO, the City of Tustin, and any local or other archive facilities designated by SHPO.	Prior to conveyance to City of Tustin	Department of the Navy	Department of the Navy	Complete
Hist-2	Curation - within 30 days of the execution of the MOA, Department of the Navy will distribute copies of plans and architectural drawings and other archival materials and records, as available, concerning the layout and the buildings and structures that made up the original Navy lighter-than-air blimp facility to a local curation facility. The City of Tustin or its designee will also be provided with copies of these materials.	Within 30 days of the execution of the MOA	Department of the Navy	Department of the Navy	Complete
Arch-1	Prior to issuance of grading permits, the four-acre parcel currently outside the	Prior to issuance of grading permits.	Project developer	Tustin Community	• **Tustin Field I (location of 4-acre site)**

	boundaries of the Air Station along Harvard Avenue shall be surveyed to determine the presence/absence of archaeological resources prior to grading.			Development Department	A paleontologist contract was executed prior to grading. During grading, a cultural resource was exposed and handled per plan. The monitoring of the site and evaluation of the object was done by SWCA in contract with JLH and all correspondence on file with CDD.
Arch-2	Prior to issuance of grading permits, the cities of Tustin and Irvine shall each require applicants of individual development projects to retain, as appropriate, a county-certified archaeologist. If buried resources are found during grading within the reuse plan area, a qualified archaeologist would need to assess the site significance and perform the appropriate mitigation. The Native American view point shall be considered during this process. This could include testing or data recovery. Native American consultation shall also be initiated during this process.	Prior to issuance of grading permits.	Project Developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** Copy of contract and paleontologist plan on file with CDD. • **Tustin Field I (Tract 16474)** During grading, archeological resources were exposed and handled per plan paleontologist plan on file with CDD. • **Tustin Field II (Tract 16507)** Copy of contract and paleontologist plan on file with CDD. • **Columbus Grove (Tract 16582)** Copy of contract and paleontologist plan on file with CDD. • **Columbus Square (Tract 16581)** Copy of contract and paleontologist plan on file with CDD. • **RSCCD (Sheriff's Training Academy)** The RSCCD retained an archaeologist for the Sheriff's Training Facility project construction; however, an archaeologist will also need to be obtained for construction of any future phases. • **SOCCCD (ATEP)** The SOCCCD retained an archaeologist for project construction of Phase 1; however, an archaeologist will also need to be obtained for construction of any future phases.

					• **Village of Hope** Developer retained a county certified archeologist for the project. • **Amalfi Apartment Homes – Irvine Company** Developer retained a county certified archeologist for the project. • **Anton Legacy – St. Anton Partners** Developer retained a county certified archeologist for the project. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Developer retained a county certified archeologist for the project. • **The Village at Tustin Legacy – Regency Centers** Developer has provided evidence of the county certified archeologist retained for the project. • **Orange County Animal Care Facility** Developer retained a county certified archeologist for the project. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. • **Flight at Tustin Legacy – Flight Venture LLC** Developer retained a county certified archeologist for the project. • **Tustin Legacy Linear Park** The City retained an archeologist for project construction. Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) of the project are complete.

					• **Veterans Sports Park** The City retained an archeologist for project construction. • **Legacy Magnet Academy – TUSD** The City retained an archeologist for project construction. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Developer has provided evidence of the county certified archeologist retained for the project. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** The City completed rough grading of the site. Developer *is* required to follow the means identified in the Paleontological Resources Management Plan on the site for the retained certified archaeologist and paleontologist. has provided evidence of the county certified archaeologist retained for the project. • **Remaining Development** Future developer(s) will be required to retain an archeologist for each project, as applicable. • **Tustin Ranch Road** The City retained an archaeologist for the duration of the Tustin Ranch Road project from Warner Avenue to Walnut Avenue, Armstrong Avenue project from Barranca Parkway to Warner Avenue, Warner Avenue project from Red Hill Avenue to Tustin Ranch Road and Disposition Areas 2B, 2C and 8 grading project. Evidence of the county certified archeologist retained for the project is on file. Project is complete.

AR-1-	Prior to issuance of a grading permit, the City of Tustin shall retain, as appropriate, a county-certified archaeologist. If buried resources are found during grading within the portion of the site located north of Edinger Avenue, a qualified archaeologist would need to assess the site significance and perform the appropriate mitigation. The Native American viewpoint shall be considered during this process. This could include testing or data recovery. Native American consultation shall also be initiated during this process. (As amended by Final Supplement #1)	Prior to issuance of a grading permit (for the Tustin Ranch Road Extension project)	City of Tustin	Community Development Department	• **Tustin Ranch Road** The City retained an archaeologist for the Tustin Ranch Road project and the project is complete
Hist-3	As specified in the MOA, a substantive effort will be made to determine whether there is an economically viable adaptive use of Hangar 28 and Hangar 29.	Ongoing, prior to making substantial changes to Hangar 28 or Hangar 29.	City of Tustin and County of Orange	Tustin Economic Development Department	The City is currently in the process of assessing adaptive reuse of Hangar 29. The City, acting as the Local Reuse Authority for former MCAS Tustin, removed the County Regional Park use for Reuse Parcel 18 (including Hangar 28) and is beginning a reuse planning process for the site.
Hist-4	If the marketing effort identifies an economically viable adaptive use of either of the complexes, that complex will be encumbered by a historic preservation covenant. In the case of the Hangar 28 complex, these measures shall balance the needs of the adaptive use and the needs for effective operation of the Federal Lands to Parks or Historic Monument programs.	Prior to making substantial changes to Hangar 28 or Hangar 29.	Department of the Navy	Tustin Community Development Department	The City is currently in the process of assessing adaptive reuse of Hangar 29. The City, acting as the Local Reuse Authority for former MCAS Tustin, removed the County Regional Park use for Reuse Parcel 18 (including Hangar 28) and is beginning a reuse planning process for the site.
Hist-5	If NPS and/or SHPO determine that, despite a marketing effort that complies with the terms of the MOA or as agreed				

	to by the City of Tustin/County of Orange, NPS, and/or SHPO, an economically viable adaptive use of the Hangar 28 complex was not identified, NPS and/or SHPO shall promptly advise Department of the Navy and notify the City of Tustin/County of Orange that the following measures are required.				
	a. Written History - The City of Tustin/County of Orange shall prepare an illustrated history report on MCAS TUSTIN, with emphasis on the initial construction of the Air Station and its World War II Navy lighter-than-air operations.	Prior to making substantial changes to Hangar 28.	Department of the Navy	NPS, SHPO, and Department of the Navy	Cooperative efforts between the City and the County are completed. The completed written history is on file with the City of Tustin and County of Orange.
	Exhibit - The City of Tustin/County of Orange shall prepare a professional-quality illustrated interpretive exhibit with emphasis on the initial construction of the air station and its World War II Navy lighter-than-air operations.				Cooperative efforts between the City and the County are completed. The finished interpretive exhibits are available for use and rotation for public displays from the City of Tustin and County of Orange.
	b. Interpretive Video - The City of Tustin/County of Orange shall prepare a professional-quality documentary video and shall undertake a one-time distribution and outreach program for the documentary video.				Cooperative efforts between the City and the County are completed. Copies of the finished interpretive video are on file with the City of Tustin and County of Orange and on the City's web site at tustinca.org.
Paleo-1	The cities of Tustin and Irvine shall each require applicants of individual development projects to comply with	Prior to issuance of grading permits.	Project developer	Community Development Department	• **The District** A copy of the contract and paleontologist plan is on file with CDD.

	the requirements established in a Paleontological Resources Management Plan prepared for the site, which details the methods to be used for surveillance of construction grading, assessing finds, and actions to be taken in the event that unique paleontological resources are discovered during construction.			(Tustin and/or Irvine, as applicable)	• **Tustin Field I (Tract 16474)** SWCA Environmental consultant was retained by JLH during grading (contract is on file with CDD). • **Tustin Field II (Tract 16507)** SWCA Environmental consultant was retained by JLH during grading (contract is on file with CDD). • **Columbus Grove (Tract 16582)** Copy of contract and paleontologist plan on file with CDD. • **Columbus Square (Tract 16581)** Copy of contract and paleontologist plan on file with CDD. • **SOCCCD (ATEP)** The SOCCCD shall be required to retain a paleontologist for all phased ATEP construction. • **RSCCD (Sheriff's Training Academy)** The RSCCD retained a paleontologist for the Sheriff's Training Facility project construction; however, a paleontologist will also need to be obtained for construction of any future phases. • **Village of Hope** Copy of contract and paleontologist plan on file with CDD. • **Tustin Family Campus** Copy of contract and paleontologist plan on file with CDD. • **Amalfi Apartment Homes – Irvine Company** Copy of contract and paleontologist plan on file with CDD.

					• **Anton Legacy – St. Anton Partners** Copy of contract and paleontologist plan on file with CDD. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Copy of contract and paleontologist plan on file with CDD. • **The Village at Tustin Legacy – Regency Centers** Copy of contract and paleontologist plan on file with CDD. • **Orange County Animal Care Facility** Copy of contract and paleontologist plan on file with CDD. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project complete. • **Flight at Tustin Legacy – Flight Venture LLC** Copy of contract and paleontologist plan on file with CDD. • **Tustin Legacy Linear Park** Copy of contract and paleontologist plan on file with CDD. Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) complete. • **Veterans Sports Park** Copy of contract and paleontologist plan on file with CDD. • **Legacy Magnet Academy – TUSD** Copy of contract and paleontologist plan on file with CDD.

					• **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Copy of contract and paleontologist plan on file with CDD. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Copy of contract and paleontologist plan on file with CDD. • **Remaining Development** Future developer(s) will be required to retain a paleontologist for each project, as applicable. A copy of each contract and paleontologist plan will be required to be kept on file at the City. • **Tustin Ranch Road** The City retained a paleontologist for the duration of the Tustin Ranch Road project from Warner Avenue to Walnut Avenue, Armstrong Avenue project from Barranca Parkway to Warner Avenue, Warner Avenue project from Red Hill Avenue to Tustin Ranch Road and Disposition Areas 2B, 2C and 8 grading projects. Copy of contract and paleontologist plan is on file with CDD.
Paleo-2	Prior to the issuance of a grading permit, project applicants shall provide written evidence to each city, that a county-certified paleontologist has been retained to conduct salvage excavation of unique paleontological resources if they are found.	Prior to issuance of grading permits.	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** Copy of contract and paleontologist plan on file with CDD. • **Tustin Field I (Tract 16474)** The contract with SWCA included the requirements (contract on file with CDD). • **Tustin Field II (Tract 16507)** The contract with SWCA included the requirements (contract on file with CDD).

					• **Columbus Grove (Tract 16582)** Copy of contract and paleontologist plan on file with CDD. • **Columbus Square (Tract 16581)** Copy of contract and paleontologist plan on file with CDD. • **SOCCCD (ATEP)** The SOCCCD shall be required to retain a paleontologist for all phased ATEP construction. • **RSCCD (Sheriff's Training Academy)** The RSCCD retained a paleontologist for the initial Sheriff's Training Facility project construction; however, a paleontologist will also need to be obtained for construction of any future phases. • **Village of Hope** Copy of contract and paleontologist plan on file with CDD. • **Tustin Family Campus** Copy of contract and paleontologist plan on file with CDD. • **Amalfi Apartment Homes – Irvine Company** Copy of contract and paleontologist plan on file with CDD. • **Anton Legacy – St. Anton Partners** Copy of contract and paleontologist plan on file with CDD. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Copy of contract and paleontologist plan on file with CDD.

					• **The Village at Tustin Legacy – Regency Centers** Copy of contract and paleontologist plan on file with CDD. • **Orange County Animal Care Facility** Copy of contract and paleontologist plan on file with CDD. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Copy of contract and paleontologist plan on file with CDD. • **Tustin Legacy Linear Park** The City retained a paleontologist for project construction. Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) of the project are complete. • **Veterans Sports Park** The City retained a paleontologist for project construction. • **Tustin Magnet School – TUSD** The City retained a paleontologist for project construction. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Copy of contract and paleontologist plan on file with CDD. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC**

					Copy of contract and paleontologist plan on file with CDD. • **Remaining Development** Future developer(s) will be required to retain a paleontologist for each project. A copy of each contract and paleontologist plan will be required to be kept on file at the City. • **Tustin Ranch Road** The City retained a paleontologist for the Tustin Ranch Road project from Warner Avenue to Walnut Avenue, Armstrong Avenue project from Barranca Parkway to Warner Avenue, Warner Avenue project from Red Hill Avenue to Tustin Ranch Road and Disposition Areas 2B, 2C and 8 grading projects. Copy of contract and paleontologist plan is on file with CDD.
PR-1	The City of Tustin shall comply with the requirements established in the Paleontological Resources Management Plan (PRMP) prepared for the Base, which details the methods to be used for surveillance of construction grading, assessing finds, and actions to be taken in the event that unique paleontological resources are discovered during construction. (As amended by Final Supplement #1 - for the Tustin Ranch Road Extension project)	During grading and construction activities.	City of Tustin	Community Development Department	• **Remaining Development** Future developer(s) will be required to retain a paleontologist for each project and implement methods to be used in the PRMP if unique resources as discovered, as applicable. A copy of each contract and paleontologist plan will be required to be kept on file at the City. • **Tustin Ranch Road** The City retained a paleontologist for the Tustin Ranch Road project from Warner Avenue to Walnut Avenue, Armstrong Avenue project from Barranca Parkway to Warner Avenue, Warner Avenue project from Red Hill Avenue to Tustin Ranch Road and Disposition Areas 2B, 2C and 8 grading projects. Copy of contract and paleontologist plan is on file with the City. Project is complete.

PR-2	Prior to the issuance of a grading permit, the City shall retain a county-certified paleontologist to conduct salvage excavation of unique paleontological resources if they are found. (As amended by Final Supplement #1- for the Tustin Ranch Road Extension project)	Prior to the issuance of a grading permit.	City of Tustin	Community Development Department	• Remaining Development Future developer(s) will be required to retain a paleontologist for each project, as applicable. A copy of each contract and paleontologist plan will be required to be kept on file at the City. • Tustin Ranch Road The City retained a paleontologist for the Tustin Ranch Road project from Warner Avenue to Walnut Avenue, Armstrong Avenue project from Barranca Parkway to Warner Avenue, Warner Avenue project from Red Hill Avenue to Tustin Ranch Road and Disposition Areas 2B, 2C and 8 grading projects. Copy of contract and paleontologist plan is on file with the City. Project is complete.
Mitigation Measures for Biological Resources					
Bio-1	The project proponents of any development affecting jurisdictional waters of the U.S. or vegetated wetlands shall obtain Section 401, Section 404, Section 1602, and other certifications, approvals and permits as necessary. Copies of the necessary state and federal permits shall be provided to the City prior to the issuance of mass or grading permits for grading activities impacting jurisdictional areas. A replacement ratio for affected wetland resources shall be determined in consultation with regulatory agencies as part of the permitting process and shall be no less than 1:1 replacement of function and value. Additional criteria and requirements will be as follows: • Create (establish), restore, or enhance wetland/riparian habitats	Prior to issuance of grading permits or any public improvements within pond turtle habitat.	Project developer	Tustin Community Development Department and/or OCFCD, as appropriate	• **The District** Required permits have been obtained. • **SOCCCD (ATEP)** Regional permits not required for Phase 1 of project; however, applicable regional permits for mitigation of any jurisdictional waters will be obtained prior to development of future phases, as applicable. • **RSCCD (Sheriff's Training Academy)** Required permits have been obtained. • **Master Development Footprint** TLCP previously obtained the applicable 401, 404, and 1602 permits; however, the proportionate portions of the permit responsibilities affecting construction of Peters Canyon Channel improvements between Tustin City limits southerly to Barranca Parkway were transferred directly from TLCP to Tustin Vista Partners, LLC, a Delaware limited liability company, on May 6, 2008. Upon

	on-site to the maximum extent practicable to minimize and replace the on-site loss of USACE and CDFG jurisdictional acreage and function, or off-site as may be permitted by the USACE and CDFG. • To return jurisdictional habitats that are temporarily disturbed during construction to pre-construction conditions. To provide for maintenance, management and monitoring of the mitigation site or sites for a minimum of three years as determined through the permitting process. (As amended by Addendum)				termination of the DDA between the City and TLCP in July 2010, the 401, 404, and 1062 permits affecting the Master Development Footprint in the City of Tustin were assigned to the City of Tustin until such time the permit(s) and/or applicable mitigation responsibilities are assigned to subsequent developer(s) in the future.
Bio-2	Based on consultations with CDFG, City of Tustin, or a project proponent as applicable, an off-site relocation site for southwestern pond turtles captured on site shall be identified that is as close to the Reuse Plan area as possible and that is sustainable in perpetuity. (No appropriate habitat in the City of Tustin is available for relocation.) Potential relocation sites include but are not limited to a turtle pond and relocation site located in upper Shady Canyon within the Orange County Nature Preserve; or the San Joaquin Marsh, which is managed by UC Irvine, Irvine Ranch, and the Orange County Water District. Some property owners and public agencies may be adverse to the relocation of species of	Prior to issuance of grading permits or any public improvements within pond turtle habitat.	City of Tustin and/or project developer, as appropriate	Tustin Community Development Department	• **The District** CDFG approved a pond turtle relocation and mitigation plan for the project; all turtles have been relocated. • **SOCCCD (ATEP)** The SOCCCD would be responsible for arrangements with CDFG for relocation of any found turtles. • **RSCCD (Sheriff's Training Academy)** The RSCCD would be responsible for arrangements with CDFG for relocation of any found turtles. • **Master Development Footprint** TLCP previously completed a pond turtle survey and CDFG approved a pond turtle relocation and mitigation plan for the project; all turtles have been relocated.

	special concern onto their property or jurisdiction, and it would be speculative to identify actual sites prior to completion of consultation with CDFG and with potential property owners and/or appropriate public agencies. A relocation and mitigation plan shall be prepared by a qualified biologist for approval by the CDFG. The relocation and mitigation plan shall include the following: • Requirement for focused surveys for southwestern pond turtles prior to construction activities and submittal of survey report to the CDFG. • Identification of specific relocation site within the Newport Bay watershed. • Methodology for trapping, capture, recordation and release of southwestern pond turtles. • Requirement of biological monitoring during construction and requirement for capture and relocation by a qualified biologist of any additional southwestern pond turtles observed during construction. (As amended by Addendum)				
Bio-3	Permits from the CDFG shall be obtained for live-capture of the turtles and for transporting them to the relocation site.	Prior to issuance of grading permits or any public improvements within pond turtle habitat.	Project developer	Tustin Community Development Department	• **The District** CDFG approved a pond turtle relocation and mitigation plan for the project; all turtles have been relocated. • **SOCCCD (ATEP)** The SOCCCD would be responsible for arrangements with CDFG for relocation of any turtles found.

					• **RSCCD (Sheriff's Training Academy)** The RSCCD would be responsible for arrangements with CDFG for relocation of any found. • **Master Development Footprint** TLCP previously completed a pond turtle survey and CDFG approved a pond turtle relocation and mitigation plan for the project; all turtles have been relocated.
Bio-4	A project proponent shall negotiate with the CDFW or other agency or organization as appropriate, for relocation of turtles and/or contribution of funds to improve, restore, or create a relocation site as turtle habitat, in conjunction with any regulatory permits necessary. (As amended by Addendum)	Ongoing	City of Tustin and/or project developer, as appropriate	Tustin Community Development Department	• **The District** CDFW approved a pond turtle relocation and mitigation plan for the project; all turtles have been relocated. • **SOCCCD (ATEP)** The SOCCCD would be responsible for arrangements with CDFW for relocation of any turtles found. • **RSCCD (Sheriff's Training Academy)** The RSCCD would be responsible for arrangements with CDFW for relocation of any found. • **Remaining Development Sites** TLCP previously completed a pond turtle survey and CDFW approved a pond turtle relocation and mitigation plan for the project; all turtles have been relocated.
Mitigation Measures for Traffic/Circulation					
T/C-1	Construction In conjunction with the approval of a site development permit, the City of Tustin and the City of Irvine, as applicable (for that portion of the reuse plan within	Prior to site development permit.	Project developer	Public Works Department (Tustin or Irvine, as applicable)	• **The District** Traffic Management Plan reviewed and approved and construction has been completed. • **Tustin Field I (Tract 16474)**

	Irvine), shall require each developer to provide traffic operations and control plans that would minimize the traffic impacts of proposed construction activity. The plans shall address roadway and lane closures, truck hours and routes, and notification procedures for planned short-term or interim changes in traffic patterns. The City of Tustin and the City of Irvine, as applicable, shall ensure that the plan would minimize anticipated delays at major intersections. Prior to approval, the City of Tustin or the City of Irvine, as applicable shall review the proposed traffic control and operations plans with any affected jurisdiction.				Traffic Management Plan reviewed and approved and construction has been completed. • **Tustin Field II (Tract 16507)** Traffic Management Plan reviewed and approved and construction has been completed. • **Columbus Grove (Tract 16582)** Traffic management plan reviewed and approved and construction has been completed. • **Columbus Square (Tract 16581)** Traffic improvement plan reviewed and approved and construction has been completed. • **Tustin Family Campus** Routes provided to and approved by Public Works. • **SOCCCD (ATEP)** Routes provided to and approved by Public Works for Phase 1 of the project; however, all routes for future phases will need to be provided to and approved by Public Works. • **RSCCD (Sheriff's Training Academy)** Routes provided to and approved by Public Works for the initial Sheriff's Training Facility project; however, all routes for future phases will need to be provided to and approved by Public Works. • **Amalfi Apartment Homes – Irvine Company** Street improvement plans have been completed. The City monitored construction activities for compliance with approved plans and procedures. • **Anton Legacy – St. Anton Partners** Street improvement plans been completed. The City monitored construction activities for compliance with approved plans and procedures.

					• **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Street improvement plans have been designed and approved and are complete. The City monitored construction activities for compliance with approved plans and procedures. • **The Village at Tustin Legacy – Regency Centers** Street improvement plans have been designed and approved and are complete. The City monitored construction activities for compliance with approved plans and procedures. • **Orange County Animal Care Facility** Street improvement plans have been designed and approved and construction is complete. The City monitored construction activities for compliance with approved plans and procedures. • **Army Reserve Center** Street improvement plans have been designed and approved and construction is complete. The City monitored construction activities for compliance with approved plans and procedures. • **Flight at Tustin Legacy – Flight Venture LLC** Street improvement plans have been designed and approved and construction is complete. The City monitored construction activities for compliance with approved plans and procedures. • **Tustin Legacy Linear Park** The City monitored and approved traffic control plans at time of construction. • **Veterans Sports Park** The City monitored and approved traffic control plans at time of construction.

					• **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Street improvement plans have been designed and approved and are *complete*. The City *monitored* construction activities for compliance with approved plans and procedures. • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Street improvement plans have been designed and approved and are under construction. The City is monitoring construction activities for compliance with approved plans and procedures. • **Remaining Development** Future developer(s) will be required to provide traffic management plan to be reviewed and approved by the City prior to construction activity.
T/C-2	Development The City of Tustin and the City of Irvine, as applicable (for that portion of the reuse plan area within Irvine), shall ensure that the arterial intersection improvements required in 2005 and 2020 and as indicated in Tables 4.12-7 and 4.12-9 of the Final EIS/EIR are implemented for their respective jurisdictions according to the cumulative ADT thresholds identified in each table and according to the Fair Share basis noted. The ADT threshold represents the traffic volume which would result in an impact and the Fair Share percentage reflects the percent of the traffic impact resulting from the reuse generated traffic. In some cases, reuse traffic would generate 100 percent of the	Prior to issuance of certificates of occupancy.	Project developer	Public Works Department (Tustin or Irvine, as applicable)	MCAS Tustin Specific Plan "Trips" are monitored for compliance with ADT Thresholds by Public Works Department on an ongoing basis as projects are entitled. • **The District** Final traffic study identified cumulative ADTs; the project ADT does not exceed thresholds identified in the FEIS/EIR as amended by the Supplemental Agreement between the Cities of Irvine and Tustin dated February 22, 2001, for off-site mitigation at arterial intersections. The traffic study determined the need for a traffic signal at Park Avenue and District Drive. Construction of this traffic signal is complete. • **Tustin Field I (Tract 16474)** Traffic Management Plan reviewed and approved and construction is complete

	impact, thereby assuming full financial responsibility for the identified improvements. In other cases, reuse traffic would generate only a fraction of the traffic impacting the intersection and financial responsibility would correspond.				• **Tustin Field II (Tract 16507)** Staff received final traffic study addressing cumulative ADT thresholds and Fair Share responsibility for mitigation improvements; traffic study determined need for traffic signal at Edinger Avenue/Aviation Drive and at Moffett Drive/Meridian Street. Construction is complete. • **Columbus Grove (Tract 16582)** Staff received final traffic study addressing cumulative ADT thresholds and Fair Share responsibility for mitigation improvements; traffic study determined need for modification of the traffic signal at Harvard Avenue and Moffett Drive. Plans for off-site improvement reviewed and approved. Construction is complete. • **Columbus Square (Tract 16581)** Staff received final traffic study addressing cumulative ADT thresholds and Fair Share responsibility for mitigation improvements; traffic study determined need for two (2) traffic signals at Kensington Park Drive and Georgia Street and Valencia/Columbus Square Street; Improvement Plans reviewed and approved. Construction is complete. • **SOCCCD (ATEP)** The trip count for the ATEP is based on square feet. The project is within the "Learning Village" trip budget identified in the MCAS Tustin Specific Plan allocated to Phase 1 of the project; however, trip counts for future phases will be monitored by the City pursuant to the Development Agreement and Amended and Restated (Conveyance) Agreement. • **RSCCD (Sheriff's Training Academy)** The trip counts for the initial Learning Village are based on square feet. The Sheriff's Training Facility project, in addition to other approved projects within

					the Education Village (ATEP), is within the EIS/EIR trip budget. Any future phases will need to comply with the maximum development permitted on the site by the ADT budget. • **Amalfi Apartment Homes – Irvine Company** Traffic Management Plan was reviewed and approved by the Public Works Department. The project is complete. • **Anton Legacy – St. Anton Partners** Traffic Management Plan was reviewed and approved by the Public Works Department. The project is complete. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Traffic Management Plan has been reviewed and approved by the Public Works Department and construction is complete. • **The Village at Tustin Legacy – Regency Centers** Final traffic study identified cumulative ADTs; the project ADT does not exceed thresholds identified in the FEIS/EIR as amended by the Supplemental Agreement between the Cities of Irvine and Tustin dated February 22, 2001, for off-site mitigation at arterial intersections. Construction is nearly complete. • **Orange County Animal Care Facility** Traffic Management Plan has been reviewed and approved by the Public Works Department and will complies with the ADT budget. Construction is complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of

					the federal government. Project complied with ADT budget. Construction is complete. • **Flight at Tustin Legacy – Flight Venture LLC** The project is within the EIS/EIR trip budget. The Traffic Management Plan was reviewed and approved by the Public Works Department and construction is complete. • **Tustin Legacy Linear Park** The City monitored and approved traffic control plans at time of construction. • **Veterans Sports Park** The City monitored and approved traffic control plans at time of construction. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Traffic Management Plan has been reviewed and approved by the Public Works Department and *complies with* the ADT budget. Construction is *complete.* • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Traffic Management Plan has been reviewed and approved by the Public Works Department and *complies* with the ADT budget. Construction is underway. • **Remaining Development** Developers will be required to provide traffic studies for each neighborhood, as applicable, as planned are developed.
T/C-3	The City of Tustin and the City of Irvine, as applicable (for that portion of the reuse plan area within Irvine), shall	See Table 4.12-8 of the Final EIS/EIR for each	Project developer	Public Works Department	• **The District (Vestar/Kimco)** The DDA addresses developers required Fair Share Contribution towards the Tustin Legacy

	contribute, on a Fair Share basis, to improvements to freeway ramp intersections as listed in Table 4.12-8 of the Final EIS/EIR. The method of implementing improvements, e.g., restriping, ramp widening, shall be based on special design studies, in association with Caltrans.	specific triggering mechanism.		(Tustin or Irvine, as applicable)	Infrastructure Program, as well as an implementing Infrastructure Construction and Payment Agreement (as amended), entitlement conditions of approval and CFD No. 07-01. Required improvements have been completed. • **Tustin Field I (Tract 16474)** The DDA addresses developers required Fair Share Contribution towards the Tustin Legacy Infrastructure Program, entitlement conditions of approval and CFD No. 04-01. • **Tustin Field II (Tract 16507)** The DDA addresses developers required Fair Share Contribution towards the Tustin Legacy Infrastructure Program, entitlement conditions of approval, and CFD No. 04-01. • **Columbus Grove (Tract 16582)** The Cooperative Agreement with developer addresses the required Fair Share Contribution towards Tustin Legacy Infrastructure, the conditions of entitlement conditions for the project, and CFD No. 06-01. • **Columbus Square (Tract 16581)** The Cooperative Agreement with developer addresses the required Fair Share Contribution towards Tustin Legacy Infrastructure, the conditions of entitlement conditions for the project, and CFD No. 06-01. • **SOCCCD (ATEP)** Pursuant to the Development Agreement and Restated and Amended (Conveyance) Agreement, SOCCCD is required to construct all on-site improvements; however, the City has exempted SOCCCD from City CFD funded Tustin Legacy Infrastructure costs for the primary educational uses

					(Land Use Category 1) while it requires payment of its fair share of Infrastructure fees for non-educational uses (Land Use Category 2), and is still subject to assessments from outside utility purveyors regardless of the use of project and would be responsible for any costs that are necessary if SOCCCD proposes to modify or alter existing Tustin Legacy Infrastructure. • **RSCCD (Sheriff's Training Academy)** Based on City Council Policy and provisions of the Conveyance Agreement, RSCCD is exempt from required Fair Share Contributions towards Tustin Legacy Infrastructure since the use is public educational. • **Amalfi Apartment Homes – Irvine Company** The DDA addresses developers required Fair Share Contribution towards the Tustin Legacy Infrastructure Program. • **Anton Legacy – St. Anton Partners** The DDA addresses developers required Fair Share Contribution towards the Tustin Legacy Infrastructure Program. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** The DDA, entitlement conditions and approval of CFD 14-01 address developer's required Fair Share Contribution towards the Tustin Legacy Infrastructure Program. • **The Village at Tustin Legacy – Regency Centers** The DDA and entitlement conditions address developer's required Fair Share Contribution towards the Tustin Legacy Infrastructure Program. • **Orange County Animal Care Facility**

					The City of Tustin has a cooperative agreement with the County of Orange. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. • **Army Reserve Center** The City of Tustin has a land exchange agreement with the federal government. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. • **Flight at Tustin Legacy – Flight Venture LLC** The DDA and entitlement conditions address developer's required Fair Share Contribution towards the Tustin Legacy Infrastructure Program. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** The DDA and entitlement conditions address developer's required Fair Share Contribution towards the Tustin Legacy Infrastructure Program. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** The DDA and entitlement conditions address developer's required Fair Share Contribution towards the Tustin Legacy Infrastructure Program. • **Remaining Development** Future developer(s) will be required to make the applicable Fair Share contribution towards construction of Tustin Legacy Infrastructure and any

					required CFD assessments at the entitlement application stage.

T/C-4	The City of Tustin and the City of Irvine, as applicable (for that portion of the reuse plan area within Irvine), shall ensure that all on-site circulation system improvements for the reuse plan area assumed in the 2005 and 2020 traffic analysis and as shown in Table 4-4 of the revised Specific Plan Phasing Plan (see Table 4-4 at the end of the Mitigation Monitoring and Reporting Program) are implemented according to the cumulative ADT thresholds identified in the table. Under this Phasing Plan, the City of Tustin shall monitor all new development within the site, accounting for the cumulative ADT generated by development projects. As each ADT threshold is reached, the roadway improvements listed in Table 4-4 of the revised Specific Plan Phasing Plan (see Table 4-4 at the end of the Mitigation Monitoring and Reporting Program) shall be constructed before any additional projects within the reuse plan area would be approved. (As amended by Addendum)	Ongoing (see Table 4.12-10 of the Final EIS/EIR or Table 4-4 at the end of the Mitigation Monitoring and Reporting Program for each specific triggering mechanism.	Project developer	Public Works Department (Tustin or Irvine, as applicable)	MCAS Tustin Specific Plan "Trips" are monitored by Public Works Department on an ongoing basis as projects are entitled. • **The District** Final traffic study identified cumulative ADT: the project ADT does not exceed thresholds identified in the FEIS/EIR as modified by the supplemental Mitigation Agreement between the Cities of Irvine and Tustin dated February 22, 2001 for off-site mitigation at arterial intersections. • **Tustin Field I (Tract 16474)** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. • **Tustin Field II (Tract 16507)** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. Required improvements addressed with DDA, entitlement conditions and funding of CFD No. 04-01. • **Columbus Grove (Tract 16582)** Project ADT determined for project and ADT threshold reviewed for compliance with Roadway Improvement Table. Required improvements addressed with DDA, entitlement conditions, and funding of CFD No. 06-01. • **Columbus Square (Tract 16581)** Project ADT determined for project and ADT threshold reviewed for compliance with Roadway Improvement Table. Required improvements addressed with DDA, entitlement conditions, and funding of CFD No. 06-01.

					• **SOCCCD (ATEP)** The trip counts for the ATEP are based on square feet. The project is within the Learning Village trip budget as allocated for Phase 1 of the project; however, all future phases will be monitored by the City pursuant to the Development Agreement and Amended and Restated (Conveyance) Agreement. • **RSCCD (Sheriff's Training Academy)** The trip counts for the Learning Village are based on square feet. The initial Sheriff's Training Facility project, in addition to other approved projects within the Learning Village (ATEP), is within the EIS/EIR trip budget Any future phases will be evaluated at the application stage. • **Amalfi Apartment Homes – Irvine Company** Project ADT determined for project and ADT threshold reviewed for compliance with Roadway Improvement Table. Required improvements addressed with DDA and entitlement conditions. • **Anton Legacy – St. Anton Partners** Project ADT determined for project and ADT threshold reviewed for compliance with Roadway Improvement Table. Required improvements addressed with DDA and entitlement conditions. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Project ADT determined for project and ADT threshold reviewed for compliance with Roadway Improvement Table. Required improvements addressed with DDA, entitlement conditions, and funding of CFD No. 14-01.

					• **The Village at Tustin Legacy – Regency Centers** Project ADT determined for project and ADT threshold reviewed for compliance with Roadway Improvement Table. Required improvements addressed with DDA and entitlement conditions. • **Orange County Animal Care Facility** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. • **Army Reserve Center** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. • **Flight at Tustin Legacy – Flight Venture LLC** Project ADT determined for project and ADT threshold reviewed for compliance with Roadway Improvement Table. Required improvements addressed with DDA and entitlement conditions. • **Tustin Legacy Linear Park** Project ADT determined for project and ADT threshold *have been* reviewed for compliance with Roadway Improvement Table. • **Veterans Sports Park** Project ADT determined for project and ADT threshold *have been* reviewed for compliance with Roadway Improvement Table. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Project ADT determined for project and ADT threshold *have been* reviewed for compliance with Roadway Improvement Table.

					• ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Project ADT determined for project and ADT threshold *have been* reviewed for compliance with Roadway Improvement Table. • **Remaining Development** Future development ADT will need to comply with Roadway Improvement Table.
T/C-5	Prior to approval of a site development permit or vesting tract, except for financing or conveyance purposes, for all land use designation areas in Alternative 1 with the exception of the Learning Village, Community Park, and Regional Park, a project developer shall enter into an agreement with the City of Tustin and City of Irvine, as applicable (for that portion of the reuse plan area within Irvine) which assigns improvements required in the EIS/EIR to the development site and which requires participation in a Fair Share mechanism to design and construct required on-site and arterial improvements consistent with the ADT generation thresholds shown in Table 4-4 of the revised Specific Plan Phasing Plan (see Tables 4-4 at the end of the Mitigation Monitoring and Reporting Program). (As amended by Addendum)	Ongoing, prior to approval of a site development permit or vesting tract, except for financing or conveyance purposes, based on the ADT generation thresholds shown in Tables 4.12-7, 4.12-8, 4.12-9, and 4.12-10 of the Final EIS/EIR (see Table4-4 at the end of the Mitigation Monitoring and Reporting Program for each specific triggering mechanism).	Project developer	Public Works/ Community Development Departments (Tustin and/or Irvine, as applicable)	• **The District** Included in the DDA, Infrastructure and Construction Agreement (as amended), entitlement conditions and CFD No. 07-01 Acquisition and Construction Agreement. • **Tustin Field I (Tract 16474)** Included in the DDA, entitlement conditions and CFD No. 04-01 Acquisition and Construction Agreement. • **Tustin Field II (Tract 16507)** Included in the DDA, entitlement conditions, and CFD No. 04-01 Acquisition and Construction Agreement. • **Columbus Grove (Tract 16582)** Included in the Cooperative Agreement, entitlement conditions, and CFD No. 06-01 Acquisition and Construction Agreement • **Columbus Square (Tract 16581)** Included in the Cooperative Agreement, entitlement conditions, and CFD No. 06-01 Acquisition and Construction Agreement. • **SOCCCD (ATEP)** Pursuant to the Development Agreement and Restated and Amended (Conveyance) Agreement,

					SOCCCD is required to construct all on-site improvements; however, the City has exempted SOCCCD from City CFD funded Tustin Legacy Infrastructure costs for the primary educational uses (Land Use Category 1) while it requires payment of its Fair Share of Infrastructure fees for non-educational uses (Land Use Category 2), and is still subject to assessments from outside utility purveyors regardless of the use of project and would be responsible for any costs that are necessary if SOCCCD proposes to modify or alter existing Tustin Legacy Infrastructure. • **RSCCD (Sheriff's Training Academy)** Tustin City Council policy exempts a public educational use from the Fair Share Contribution towards the Tustin Legacy Infrastructure Program. The RSCCCD Regional Law Enforcement facility is a public use and is exempt. But would be responsible for any alteration of existing improvements in the public right-of-way necessary for their projects, subject to approval of the City. • **Amalfi Apartment Homes – Irvine Company** Included in the DDA and entitlement conditions. • **Anton Legacy – St. Anton Partners** Included in the DDA and entitlement conditions. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Included in the DDA 2013-03, entitlement conditions and CFD No. 14-01 Acquisition and Construction Agreement. • **The Village at Tustin Legacy – Regency Centers** Included in the DDA and entitlement conditions.

					• **Orange County Animal Care Facility** The City of Tustin has a cooperative agreement with the County of Orange. Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. Project is complete. • **Army Reserve Center** The City of Tustin has a land exchange agreement with the Secretary of the Army. Building permits and related inspections for construction of the facility are the responsibility of the federal government. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. Project is complete. • **Flight at Tustin Legacy – Flight Venture LLC** Included in the DDA and entitlement conditions. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Included in the DDA and entitlement conditions. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Included in the DDA and entitlement conditions. • **Remaining Development** Future developer(s) will be required to make the applicable Fair Share contribution towards construction of Tustin Legacy Infrastructure and any improvements required to be constructed by

					developer, entitlement conditions at each application stage will reinforce these requirements pursuant to the Disposition Strategy.
T/C-6	The City of Tustin and the City of Irvine, as applicable (for that portion of the reuse plan area in Irvine), will monitor new development within the reuse plan area, accounting for the cumulative ADTs generated by development projects within the reuse plan area. As each cumulative ADT threshold shown in Table 4-4 of the revised Specific Plan Phasing Plan ~~4.12-10~~ (see Table 4-4 at the end of the Mitigation Monitoring and Reporting Program) is reached, the roadway improvements listed shall be constructed before any additional projects within the reuse plan area are approved. (As amended by Addendum)	Ongoing, based on the ADT generation thresholds shown in Table 4.12-10 of the Final EIS/EIR (see Table 4-4 at the end of the Mitigation Monitoring and Reporting Program for each specific triggering mechanism).	Project developer	Public Works and Community Development Departments (Tustin and/or Irvine, as applicable)	MCAS Tustin Specific Plan "Trips" are monitored by Public Works Department on an ongoing basis as projects are entitled. • **The District** Final traffic study identified cumulative ADTs; City monitoring will determine timing of roadway improvements identified in MMP Table 4-4; per project final traffic study, project does not exceed ADT threshold level requiring roadway improvements shown in Table 4-4. • **Tustin Field I (Tract 16474)** Final traffic study identified cumulative ADTs; City monitoring will determine timing of roadway improvements identified in MMP Table 4-4; per project final traffic study, project does not exceed ADT threshold level requiring roadway improvements shown in Table 4-4. • **Tustin Field II (Tract 16507)** Final traffic study identified cumulative ADTs; City monitoring will determine timing of roadway improvements identified in MMP Table 4-4; per project final traffic study, project does not exceed ADT threshold level requiring roadway improvements shown in Table 4-4. • **Columbus Grove (Tract 16582)** Final traffic study identified cumulative ADTs; City monitoring will determine timing of roadway improvements identified in MMP Table 4-4; per project final traffic study, project does not exceed ADT threshold level requiring roadway improvements shown in Table 4-4.

					• **Columbus Square (Tract 16581)** Final traffic study identified cumulative ADTs; City monitoring will determine timing of roadway improvements identified in MMP Table 4-4; per project final traffic study, project does not exceed ADT threshold level requiring roadway improvements shown in Table 4-4. • **SOCCCD (ATEP)** As on-site development takes place, traffic studies to determine Average Daily Trip (ADT) levels will be required to ensure compliance with ADTs threshold. • **RSCCD (Sheriff's Training Academy)** The trip counts for the Learning Village are based on permitted total square footages and F.A.R for each use. The initial Sheriff's Training Facility project, in addition to other approved projects within the Learning Village (ATEP), is within the EIS/EIR trip budget any future phases will be also evaluated against the Trip budget. • **Amalfi Apartment Homes – Irvine Company** Project has been determined to be within the thresholds and appropriate infrastructure improvements have been made as condition of approval of the project. • **Anton Legacy – St. Anton Partners** Project has been determined to be within the thresholds and appropriate infrastructure improvements have been made as condition of approval of the project. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Project has been determined to be within the thresholds and appropriate infrastructure

					improvements have been made as condition of approval of the project. • **The Village at Tustin Legacy – Regency Centers** Project has been determined to be within the thresholds and appropriate infrastructure improvements have been made as condition of approval of the project. • **Orange County Animal Care Facility** The City of Tustin has a cooperative agreement with the County of Orange. Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. • **Army Reserve Center** The City of Tustin has a land exchange agreement with the Secretary of the Army. Building permits and related inspections for construction of the facility are the responsibility of the federal government. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. Project is complete. • **Flight at Tustin Legacy – Flight Venture LLC** Project has been determined to be within the thresholds and appropriate infrastructure improvements were made as condition of approval. • **Tustin Legacy Linear Park** Public Works Department monitored compliance with cumulative ADTs on an ongoing basis as this project was approved. • **Veterans Sports Park**

					Public Works Department monitored compliance with cumulative ADTs on an ongoing basis as this project was approved • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Project has been determined to be within the thresholds and appropriate infrastructure improvements were made as a condition of approval of the project. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Project has been determined to be within the thresholds and appropriate infrastructure improvements will be made as a condition of approval of the project. • **Remaining Development** Traffic Studies, as necessary, will be required at the entitlement application stage for each neighborhood development. Cumulative ADTs will be identified and any required improvements necessary as a condition of occupancy will be identified with entitlements. Conditions of entitlements and City monitoring will determine timing of roadway improvements.
T/C-7	The City of Tustin shall adopt a trip budget for individual portions of the reuse plan area to assist in the monitoring of cumulative ADTs and the amount and intensity of permitted non-residential uses as evaluated in the EIS/EIR.	Within one (1) year of project approval, and ongoing thereafter.	City of Tustin	Tustin Public Works and Community Development Departments	A trip budget has been adopted for individual portions of the reuse plan. "Trips" are monitored on individual portions of the reuse plan are monitored by Public Works Department on an ongoing basis as projects are entitled.

T/C-8	Alternative improvements that provide an equivalent level of mitigation in 2005 or 2020 to what is identified in Tables 4.12-7, 4.12-8, and 4.12-9 of the Final EIS/EIR (see Tables 2 through 4) at the end of the Mitigation Monitoring and Reporting Program) may be identified in consultation between the City of Tustin and the City of Irvine, as applicable, and the impacted jurisdiction.	Ongoing	City of Tustin and/or City of Irvine	Public Works and Community Development Departments (Tustin and/or Irvine, as applicable)	The City of Tustin and Irvine in 2001 entered into a Mitigation Agreement that does identify alternative mitigation measures to those identified in the FEIS/EIR. Subsequently, the City of Irvine and the City of Tustin entered into a Settlement Agreement and Mutual Release of Claims on July 13, 2010, for the IBC Vision Plan that further refined the mitigation measures identified in the 2001 Settlement Mitigation Agreement. The City of Irvine and the City of Tustin entered into a Settlement Agreement and General Release in July 2013.
T/C-9	The City of Tustin shall enter into agreements with Caltrans and the cities of Santa Ana and Irvine to ensure that the off-site roadway improvements needed to mitigate the effects of the proposed alternative are constructed pursuant to improvement programs established by the respective jurisdiction. In order to properly coordinate the timing and improvements in the adjacent jurisdictions, the City of Tustin shall hold a scoping-like meeting with the respective jurisdictions. The purpose of said scoping-like meeting shall be to identify the concerns of the respective jurisdictions prior to the initiation of the Fair Share study. The purpose of the study would be to fully identify, with each jurisdiction, the scope and costs of feasible improvements (as determined by the respective jurisdiction). The improvements would be acceptable to each jurisdiction toward fulfilling the timing and cost of the transportation improvement obligations as required to	Within one (1) year of project approval.	City of Tustin, City of Irvine	Public Works and Community Development Departments (Tustin and/or Irvine, as applicable)	Mitigation Agreements with City of Santa Ana and City of Irvine executed in February 2001. There are no impacts identified which require a Caltrans agreement.

	mitigate transportation impacts in each jurisdiction. The funding for the improvements to be incorporated into the agreement would be utilized by the respective agency to improve the capacity of the impacted intersections/links or be used for substituted improvements, as determined by mutual agreement. Prior to execution of the agreement, each jurisdiction would be allowed ten (10) working days to review the technical report prior to being provided with a copy of the proposed agreement. Each jurisdiction would then have ten (10) working days to review and comment as to its concurrence with the improvement programs contained in the agreement. The comments of each jurisdiction would be considered to ensure that the City of Tustin's responsibility for Fair Share funding of the improvements in each jurisdiction as stated above is fully addressed.				
TC-1	A westbound shared through/right-turn lane shall be added to the Redhill Avenue/Warner Avenue intersection (As amended by Final Supplement #1)	Opening Tustin Ranch Road Extension.	City of Tustin	Public Works Department	Based upon the most recent traffic volumes, this improvement is no longer needed to maintain acceptable levels.
IA-1	Table 4.12-10 of the Final EIS/EIR, as revised and presented in Table 4-4 of the revised Specific Plan Phasing Plan (see Table 4-4 at the end of the Mitigation Monitoring and Reporting Program) presents the Phasing Plan for the on-site circulation system. The Phasing Plan is	See Table 4.12-10 of the Final EIS/EIR or Table 4-4 at the end of the Mitigation Monitoring and Reporting Program	City of Tustin	Community Development and Public Works Departments (Tustin and/or Irvine, as applicable)	MCAS Tustin Specific Plan “Trips” are monitored by Public Works Department on an ongoing basis as projects are entitled.

	based upon traffic circulation impact and mitigation analyses contained in the Tustin Legacy Traffic Analysis (Austin-Foust Associates, Inc., February 2006). Under this Specific Plan Phasing Plan, the City of Tustin shall monitor all new development within the Specific Plan, accounting for the cumulative ADT generated by development projects. As each ADT threshold is reached, the roadway improvements listed in Tables 4-3 and 4-4 of the revised Specific Plan Phasing Plan (see Tables 4-3 and 4-4 at the end of the Mitigation Monitoring and Reporting Program) shall be constructed before any additional projects within the Specific Plan would be approved. (As amended by Addendum)	for each specific triggering mechanism.			
IA-2	Table 7-3 of the Final EIS/EIR (see Table 3-3 at the end of the Mitigation Monitoring and Reporting Program) presents the Trip Budget which summarizes the square footage of non-residential uses allocated to each neighborhood by Planning Area and the associated ADT. (Residential uses are shown for information only, they are not part of the budget.) Pursuant to Section 3.2.4 of the Specific Plan, the City of Tustin shall implement the trip budget by neighborhood to control the amount and intensity of non-residential uses. Trip Budget transfers between neighborhoods shall also be implemented as directed in subsection 3.2.4 of the Specific Plan.	See Table 7-3 of the Final EIS/EIR or Table 6 at the end of the Mitigati-on Monitoring and Reporting Program for each specific triggering mechanism.	City of Tustin	Tustin Community Development and Public Works Departments	MCAS Tustin Specific Plan “Trips” are monitored by Public Works Department and Community Development Department on an ongoing basis as projects are entitled by neighborhood.

IA-3	Prior to the approval of (1) a Site Plan and Design Review pursuant to Section 4.2 of the Specific Plan, (2) a site development permit, or (3) a vesting tentative map for new square footage (not for financing or conveyance purposes), a project developer shall provide traffic information consistent with the provisions of the Specific Plan, the FEIS/EIR, and this Addendum, and the requirements of the City of Tustin Traffic Engineer. The traffic information shall (a) identify and assign traffic circulation mitigation measures required in the EIS/EIR pursuant to the Phasing Plan described in Tables 4-2 and 4-3 of the Tustin Legacy Specific Plan Phasing Plan (see Table 4-4 at the end of the Mitigation Monitoring and Reporting Program); (b) evaluate the effects of either the delay of any previously committed circulation improvements or the construction of currently unanticipated circulation improvements; and (c) utilize the circulation system and capacity assumptions within the EIS/EIR and any additional circulation improvements completed by affected jurisdictions for the applicable timeframe of analysis. (As amended by Addendum and Supplemental #2)	Prior to the approval of (1) a Site Plan and Design Review pursuant to Section 4.2 of the Specific Plan, (2) a site development permit, or (3) a vesting tentative map for new squa-re footage (not for financing or conveyance purposes).	Project developer	Tustin Community Development and Public Works Departments	• **The District** Traffic Analysis was prepared and all requirements installed. • **Tustin Field I (Tract 16474)** Traffic Analysis was prepared and all requirements installed. • **Tustin Field II (Tract 16507)** Traffic Analysis was prepared and all requirements installed. • **Columbus Grove (Tract 16582)** Traffic Analysis was prepared and all requirements installed. • **Columbus Square (Tract 16581)** Traffic Analysis was prepared and all requirements installed. • **SOCCCD (ATEP)** The trip counts for the ATEP are based on square feet. The project is within the Learning Village trip budget as allocated for Phase 1 of the project; however, all future phases will be monitored by the City pursuant to the Development Agreement and Amended and Restated (Conveyance) Agreement. • **RSCCD (Sheriff's Training Academy)** The initial Sheriff's Training Facility project is complete. The project, combined with other ongoing projects, is within the trip budget as determined by the capacity assumptions of the EIR/EIS and any future phase will be evaluated when they are processed.

					• **Amalfi Apartment Homes – Irvine Company** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. All requirements installed. • **Anton Legacy – St. Anton Partners** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. All requirements installed. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. Required improvements addressed with DDA, entitlement conditions, and funding of CFD No. 14-01. All requirements installed. • **The Village at Tustin Legacy – Regency Centers** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. Required improvements addressed with DDA and entitlement conditions. • **Orange County Animal Care Facility** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. • **Army Reserve Center** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. • **Flight at Tustin Legacy – Flight Venture LLC** Project ADT determined consistent with ADT threshold Table for compliance with Roadway

					Improvement Table. Required improvements addressed with DDA and entitlement conditions. • **Tustin Legacy Linear Park** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. • **Veterans Sports Park** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. Required improvements addressed with DDA and entitlement conditions. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Project ADT determined consistent with ADT threshold Table for compliance with Roadway Improvement Table. Required improvements addressed within DDA and entitlement conditions. • **Remaining Development** An updated Traffic Analysis may be required in conjunction with requests for entitlements for individual neighborhood phases by subsequent developers.
IA-4	Prior to the issuance of building permits for new development within planning areas requiring a concept plan, a project developer shall enter into an agreement with the City of Tustin to (a) design and construct roadway improvements	Prior to the issuance of building permits.	Project developer	Tustin Community Development and Public Works Departments	• **The District** DDA and Infrastructure Construction and Payment Agreement, as amended, entered into which identifies required design and construction obligations as well as entitlement conditions, and documentation for CFD No. 07-01 Traffic analysis

	consistent with the ADT generation Phasing Plan described in Tables 4-2 and 4-3 of the Tustin Legacy Specific Plan Phasing Plan (see Table 4-4 at the end of the Mitigation Monitoring and Reporting Program) and (b) address the impact of and specify the responsibility for any previously committed circulation improvements assumed in the EIS/EIR which have not been constructed. (As amended by Addendum and Supplement #2)				completed and required improvements are currently under construction. • **Tustin Field I (Tract 16474)** DDA entered into and Improvements included in entitlement conditions and CFD 04-01 documentation. • **Tustin Field II (Tract 16507)** DDA entered into and Improvements included in entitlement conditions and CFD 04-01 documentation. • **Columbus Grove** Cooperative Agreement entered into, with Improvements included in entitlement conditions and CFD 06-01 documentation. • **Columbus Square** Cooperative Agreement entered into with Improvements included in entitlement conditions and in CFD 06-01 documentation. • **SOCCCD (ATEP)** Pursuant to the Development Agreement and Restated and Amended (Conveyance) Agreement, SOCCCD is required to construct all on-site improvements; however, the City has exempted SOCCCD from City CFD funded Tustin Legacy Infrastructure costs for the primary educational uses (Land Use Category 1) while it requires payment of its Fair Share of Infrastructure fees for non-educational uses (Land Use Category 2), and is still subject to assessments from outside utility purveyors regardless of the use of project and would be responsible for any costs that are necessary if SOCCCD proposes to modify or alter existing Tustin Legacy Infrastructure.

					• **RSCCD (Sheriff's Training Academy)** An Agreement has been entered into. The initial facility is currently in compliance since it is an educational public use, which is exempt under City Council policy from Tustin Legacy Infrastructure Program obligations. • **Tustin Family Campus** An Agreement has been entered into. Under City Council policy, public use is exempt from Tustin Legacy Infrastructure Program obligations. • **Village of Hope** An Agreement has been entered into. Under City Council policy, non-profit use is exempt from Tustin Legacy Infrastructure Program obligations. • **Amalfi Apartment Homes – Irvine Company** Project conditioned appropriately for Fair Share contribution to the Infrastructure Program. • **Anton Legacy – St. Anton Partners** Project conditioned appropriately for Fair Share contribution to the Infrastructure Program. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** DDA 2013-03 entered into and improvements included in entitlement conditions and CFD 14-01 documentation. • **The Village at Tustin Legacy – Regency Centers** Project conditioned appropriately for fair share contribution to the Infrastructure Program. • **Orange County Animal Care Facility** The City of Tustin has a cooperative agreement with the County of Orange. Building permits and related inspections for construction of the facility

					are the responsibility of the County of Orange. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. • **Army Reserve Center** The City of Tustin has a land exchange agreement with the Secretary of the Army. Building permits and related inspections for construction of the facility are the responsibility of the federal government. As a public use, this project has been exempted from the Tustin Legacy Infrastructure costs. Project is complete. • **Flight at Tustin Legacy – Flight Venture LLC** Project conditioned appropriately for Fair Share contribution to the Infrastructure Program. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Project conditioned appropriately for Fair Share contribution to the Infrastructure Program. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Project conditioned appropriately for Fair Share contribution to the Infrastructure Program. • **Remaining Development** Traffic analysis completed and required contributions towards Tustin Legacy Infrastructure Program have been identified including developer-required improvements to be completed. These will

					be imposed as necessary in any subsequent developer entitlements.
IA-5	If a subsequent traffic Phasing Plan demonstrates that certain circulation improvements should be included in a different phase of Specific Plan development (accelerated or delayed) or that a circulation improvement can be substituted, the mitigation Phasing Plan in Table 4-4 of the revised Specific Plan Phasing Plan (see Table 4-4 at the end of the Mitigation Monitoring and Reporti-ng Program) may be amended, subject to approval of the City of Tustin and any other affected jurisdictions, provided that the same level of traffic mitigation and traffic capacity would be provided. (As amended by Addendum)	Ongoing	City of Tustin	Tustin Public Works and Community Development Departments	Not applicable at this time to any site at Tustin Legacy.
IA-6	The City of Tustin will enter into agreements with Caltrans and the cities of Santa Ana and Irvine to ensure that the off-site roadway improvements needed to mitigate the effects of the Specific Plan are constructed pursuant to improvement programs established by the respective jurisdiction. In order to properly coordinate the timing and funding of Fair Share obligation of Specific Plan improvements in the adjacent jurisdictions, the City of Tustin shall hold a scoping-like meeting with the respective jurisdictions. The purpose of said scoping-like meeting shall be to identify the concerns of the respective jurisdictions prior to the initiation of the	Within one (1) year of approval of reuse and disposal of MCAS Tustin	City of Tustin	Tustin Public Works and Community Development Departments	Studies have been completed and Mitigation Agreements with City of Santa Ana and City of Irvine have been executed. There are no impacts identified which require a Caltrans agreement.

	Fair Share study. The purpose of the study would be to fully identify, with each jurisdiction, the scope and costs of obligations of the Specific Plan as required to mitigate transportation impacts in feasible improvements (as determined by the respective jurisdiction). The improvements would be acceptable to each jurisdiction toward fulfilling the timing and cost of the transportation improvement each jurisdiction, as listed above. The funding for the improvements to be incorporated into the agreement would be utilized by the respective agency to improve the capacity of the impacted intersections/links or be used for substituted improvements, as determined by mutual agreement. Prior to execution of the agreement, each jurisdiction would be allowed ten working days to review the technical report prior to being provided with a copy of the proposed agreement. Each jurisdiction would then have ten working days to review and comment as to its concurrence with the improvement programs contained in the agreement. The comments of each jurisdiction would be considered to ensure that the City of Tustin's responsibility for Fair Share funding of the improvements in each jurisdiction as stated above is fully addressed.				
IA-7	Each Specific Plan project would contain, to the satisfaction of the City of Tustin and/or City of Irvine, as applicable, a pedestrian circulation	Prior to issuance of grading permits	Project developer	Community Development Department (Tustin and/or	At the entitlement stage, all development proposals at the concept plan and at design review and construction stages have been required to include a pedestrian circulation component.

	component showing pedestrian access to regional hiking trails, parks, schools, shopping areas, bus stops, and/or other public facilities.			Irvine, as applicable)	
Mitigation Measures for Air Quality					
AQ-1	During construction of the proposed project, the City, and/or developer and its contractors shall be required to comply with regional rules, which would assist in reducing short-term air pollutant emissions. SCAQMD Rule 402 requires that air pollutant emissions should not create a nuisance off-site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. The City and its contractors shall use the measures presented in SCAQMD Rule 403 Tables 1, 2 and 3 (presented in Tables 5-1, 5-2 and 5-3 of the FEIS/EIR Addendum). This compliance measure shall be included in the contractor's specifications and verified on City projects by the Department of Public Works. (As amended by Addendum)	Prior to issuance of grading or building permits.	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** Requirements were included in the construction documents and enforced during construction. • **Tustin Field I (Tract 16474)** Requirements were included in the construction documents and enforced during construction. • **Tustin Field II (Tract 16507)** Requirements were included in the construction documents and enforced during construction. • **Columbus Grove (Tract 16582)** Requirements were included in the construction documents and enforced during construction. • **Columbus Square (Tract 16581)** Requirements were included in the construction documents and enforced during construction. • **SOCCCD (ATEP)** Requirements were fulfilled by the SOCCCD during construction for Phase 1; however, future phases will be subject to the AQMD rules which require air pollutant emissions to not create nuisance off-site. • **RSCCD (Sheriff's Training Academy)** Requirements were fulfilled by the RSCCD during construction.

					• **Village of Hope** Requirements were included in the construction documents and enforced during construction. • **Amalfi Apartment Homes – Irvine Company** Requirements were included in the construction documents and enforced during construction. • **Anton Legacy – St. Anton Partners** Requirements were included in the construction documents and enforced during construction. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Requirements were included in the construction documents and enforced during construction. • **The Village at Tustin Legacy – Regency Centers** Requirements were included in the construction documents and enforced during construction. • **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project Complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Requirements were included in construction documents and were enforced during construction. • **Tustin Legacy Linear Park** Requirements will be included in construction documents and enforced during future construction. Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) of the project is complete.

					• **Veterans Sports Park** Requirements were included in construction documents and construction is complete. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Requirements were included in construction documents and *were* enforced during construction. • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Requirements *were* included in construction documents and *will be* enforced during construction. • **Remaining Development** Future developer(s) will be required to provide requirements in the construction documents and to be enforced during construction, as applicable.
AQ-2	Prior to issuance of grading permits, the project applicant shall use low VOC architectural coatings for all interior and exterior painting operations. (As amended by Supplemental #2)	Prior to issuance of grading or building permits.	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** Requirements were enforced and construction is complete. • **Tustin Field I (Tract 16474)** Requirements were enforced and construction is complete. • **Tustin Field II (Tract 16507)** Requirements were enforced and construction is complete. • **Columbus Grove (Tract 16582)** Requirements were enforced and construction is complete. • **Columbus Square (Tract 16581)**

					Requirements were enforced and construction is complete. • **Tustin Family Campus** Responsibility of the County or Orange. • **SOCCCD (ATEP)** Responsibility of the SOCCCD but will be imposed in City conditions of approval on entitlements pursuant to the Development Agreement and Restated and Amended (Conveyance) Agreement. • **RSCCD (Sheriff's Training Academy)** Responsibility of the RSCCD. • **Village of Hope** Requirements were enforced and construction is complete. • **Amalfi Apartment Homes – Irvine Company** Requirements were enforced and construction is complete. • **Anton Legacy – St. Anton Partners** Requirements were enforced and construction is complete. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Requirements were enforced and construction is complete. • **The Village at Tustin Legacy – Regency Centers** Requirements were included in the construction documents and were enforced during construction. • **Orange County Animal Care Facility** Responsibility of the County of Orange.

					• **Army Reserve Center** Responsibility of the Army Reserve Center. • **Flight at Tustin Legacy – Flight Venture LLC** Requirements were enforced and construction is complete. • **Tustin Legacy Linear Park** Requirements were included in the Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) construction and construction is complete. • **Veterans Sports Park** Requirements were included in construction documents and enforced during construction. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Requirements were included in construction documents and *construction is complete.* • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Requirements *were* included in construction documents and *will be enforced during construction.* • **Remaining Development** Future developer(s) will be conditioned at the entitlement application stage to comply with this requirement for each project, as applicable.
AQ-3	Prior to the issuance of development permits for new non-residential projects with 100 or more employees, and expanded projects where additional square footage would result in a total of 100 or more employees, the City of Tustin and the City of Irvine, as	Prior to issuance of development permits for new non-residential projects with 100 or more employees and expanded	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	

	applicable, shall impose a mix of TDM measures which, upon estimation, would result in an average vehicle ridership of at least 1.5, for each development with characteristics that would be reasonably conducive to successful implementation of such TDM measures. These TDM measures may include one or more of the following, as determined appropriate and feasible by each city on a case-by-case basis:	projects where additional square footage would result in a total of 100 or more employees			
	- Establish preferential parking for carpool vehicles. - Provide bicycle parking facilities. - Provide shower and locker facilities. - Provide carpool and vanpool loading areas. - Incorporate bus stop improvements into facility design. - Implement shuttles to shopping, eating, recreation, and/or parking and transit facilities. - Construct remote parking facilities. - Provide pedestrian circulation linkages. - Construct pedestrian grade separations. - Establish carpool and vanpool programs. - Provide cash allowances, passes, and other public transit and purchase incentives. - Establish parking fees for single occupancy vehicles. - Provide parking subsidies for rideshare vehicles. - Institute a computerized commuter rideshare matching system. - Provide a guaranteed ride-home	Prior to issuance of development permits for new non-residential projects with 100 or more employees and expanded projects where additional square footage would result in a total of 100 or more employees	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **The District** The project's approval includes the provisions of bicycle parking facilities and bus turnouts. • **Tustin Family Campus** The number of employees generated by the project for on-site occupancy is anticipated to be less than 100 employees. • **SOCCCD (ATEP)** The number of employees generated by the Phase I project for on-site occupancy was anticipated to be less than 100 employees. Future phases of development may result in 100 or more employees, which would require compliance with the TDM measures. • **RSCCD (Sheriff's Training Academy)** The number of employees generated by the project for on-site occupancy is anticipated to be less than 100 employees. • **The Village at Tustin Legacy – Regency Centers**

	program for ridesharing. - Establish alternative work week, flex-time, and compressed work week schedules. - Establish telecommuting or work-at-home programs. Provide additional vacation and compensatory leave incentives. - Provide on-site lunch rooms/cafeterias and commercial service such as banks, restaurants, and small retail. - Provide on-site day care facilities. - Establish an employee transportation coordinator(s).				The project's approval includes the provisions for bicycle parking facilities, bus turnouts, and pedestrian linkages. • **Orange County Animal Care Facility** The Animal Care Facility will be required to comply with TDM measures if the project generates a total of 100 or more employees. Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. Project Complete. • **Army Reserve Center** The Army Reserve Center will be required to comply with TDM measures if the project generates a total of 100 or more employees. Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC** Project has been conditioned appropriately to comply with the TDM measures. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Remaining Development** Non-residential developer(s) will be conditioned at the entitlement stage to comply with applicable TDM measures for each project, as applicable.
AQ-4	If not required under each individual development's TDM plan, the City of Tustin and the City of Irvine, as applicable, shall implement the	Ongoing	Project developer	Community Development Department (Tustin and/or	Each non-residential project is required to submit a TDM plan, as applicable, and the projects will be analyzed on a case-by-case basis and applicable measures would be implemented.

	following measures, as determined appropriate or feasible by each city on a case-by-case basis: - Reschedule truck deliveries and pickups for off-peak hours. - Implement lunch shuttle service from a worksite(s) to food establishments. - Implement compressed work week schedules where weekly work hours are compressed into fewer than five days, such as 9/80, 4/40, or 3/36. - Provide on-site child care and after-school facilities or contribute to off-site developments within walking distance. - Provide on-site employee services such as cafeterias, banks, etc. - Implement a pricing structure for single-occupancy employee parking, and/or provide discounts to ride sharers. - Construct off-site pedestrian facility improvements such as overpasses and wider sidewalks. - Include retail services within or adjacent to residential subdivisions. - Provide shuttles to major rail transit centers or multi-modal stations. - Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). - Synchronize traffic lights on streets impacted by development. - Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.			Irvine, as applicable)	• **The District** The project's approval includes the provisions of bicycle parking facilities and bus turnouts. • **SOCCCD (ATEP)** The project's approval includes the provisions of bicycle parking facilities and bus turnouts. • **Tustin Family Campus** Programs offered at the campus include on-site daycare, on-site residential programs for abused and neglected children and their families, and other transportation related services for the clients. • **RSCCD (Sheriff's Training Academy)** The project design includes the provisions of bicycle parking facilities, on-site gymnasium, shower facilities, and on-site employee services. • **The Village at Tustin Legacy – Regency Centers** The project's approval includes the provisions of bicycle parking facilities, bus turnouts, and pedestrian linkages. • **Orange County Animal Care Facility** Building permits and related inspections for construction of the facility are the responsibility of the County of Orange. The project design includes the provision of bus turnouts. Project Complete. • **Army Reserve Center** Building permits and related inspections for construction of the facility are the responsibility of the federal government. Project Complete. • **Flight at Tustin Legacy – Flight Venture LLC**

	- Include residential units within a commercial development. - Provide off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths. - Include bicycle parking facilities such as bicycle lockers. - Include showers for bicycling and pedestrian employees' use. - Construct on-site pedestrian facility improvements, such as building access, which is physically separated from street and parking lot traffic, and walk paths.				The project's approval includes the provisions for bicycle parking facilities, bus turn outs, and pedestrian linkages. • **Tustin Legacy Linear Park** The project's approval includes pedestrian amenities, linkages to other uses, and bike trails. • **Veterans Sports Park** The project's approval includes pedestrian amenities and linkages to residential uses. • **Remaining Development** Developer(s) of non-residential projects will be conditioned to comply with applicable TDM measures for each project, as applicable.
AQ-1	During construction of the proposed roadway extension, the following measures will be implemented to comply with existing SCAQMD Rules and Regulations: - Rule 1113 that regulates the VOC content of any paints and surface coatings that may be used in construction, - Rule 1108 that regulates the VOC content of any asphalt used in construction, SCAQMD Rules 402 and 403 that regulate the control of fugitive dust and visible emissions. - All stationary equipment (e.g., generators and compressors) .rated in excess of 50 horsepower is subject to SCAQMD permitting. (As amended by Final Supplement #1)	During construction of the Tustin Ranch Road Extension.	City of Tustin	Community Development Department.	• **Tustin Ranch Road** Tustin Ranch Road from Warner Avenue to Walnut Avenue was completed in 2013. The contractor was required to follow SCAQMD rules and regulations.

AQ-5	Applicants for new development projects within the Tustin Legacy Specific Plan shall require the construction contractor to use equipment that meets the US Environmental Protection Agency (EPA) Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities, unless it can be demonstrated to the City of Tustin that such equipment is not available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine, as defined by the California Air Resources Board's regulations. Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 4 or higher emissions standards for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City of Tustin. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to	Prior to issuance of grading or building permits/during construction	Project applicants and construction contractors	City of Tustin Building and Public Works Department	• **Flight at Tustin Legacy – Flight Venture LLC** Project complied with AQMD rules and regulations during construction. Construction complete. • **Tustin Legacy Linear Park** Project complied with AQMD rules and regulations during Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) of construction and will be required to comply with AQMD rules and regulations during construction of any subsequent phases. • **Veterans Sports Park** Project complied with AQMD rules and regulations during construction. Project complete. • **Legacy Magnet Academy – TUSD** Project *complied* with AQMD rules and regulations during construction. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Project *complied* with AQMD rules and regulations during construction. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Project *will* comply with AQMD rules and regulations during construction.

	five minutes or less in compliance with California Air Resources Board's Rule 2449. (As added by Supplemental #2)				
AQ-6	Prior to the issuance of grading permits, the applicants for individual new developments shall evaluate localized construction-related air quality impacts. Localized construction emissions shall be evaluated to the South Coast Air Quality Management District's Localized Significance Thresholds for construction. Applicable mitigation measures to reduce potential localized construction-related air quality impacts shall be included in the evaluation, as necessary, to minimize impacts to the extent feasible and shall be implemented. The evaluation shall be submitted to the City of Tustin for review. In addition, all recommended mitigation measures shall be noted on all construction plans submitted to the City of Tustin Building and Public Works Department for verification. (As added by Supplemental #2)	Prior to issuance of grading permits	Project applicants	City of Tustin Building and Public Works Department	• **Flight at Tustin Legacy – Flight Venture LLC** Project complied with AQMD rules and regulations during construction. Construction complete. • **Tustin Legacy Linear Park** Project complied with AQMD rules and regulations during Phase 1 and 2 (Red Hill Avenue to Armstrong Avenue) of construction and will be required to comply with AQMD rules and regulations during construction of any subsequent phases. • **Veterans Sports Park** Project complied with AQMD rules and regulations during construction. • **Legacy Magnet Academy – TUSD** Project *complied* with AQMD rules and regulations during construction. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)** Project *complied* with AQMD rules and regulations during construction. • ***The Landing at Tustin Legacy* – Brookfield Homes Southern California LLC** Project will comply with AQMD rules and regulations during construction.
Mitigation Measures for Noise					

N-1	Prior to reuse of any existing residential units within the reuse area for civilian use, the City of Tustin or the City of Irvine, as applicable, and where necessary and feasible, shall require the installation of noise attenuation barriers, insulation, or similar devices to ensure that interior and exterior noise levels at these residential units do not exceed applicable noise standards.	Prior to reuse of any existing residential units.	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	No reuse of any existing residential is proposed.
N-2	During design of the grade-separated intersection of Tustin Ranch Road at Edinger Avenue, the City of Tustin shall evaluate potential noise impacts on surrounding properties to the northeast of Edinger Avenue and shall incorporate into the design of this intersection noise attenuation measures determined appropriate and feasible by the City of Tustin, in order to ensure that these surrounding properties do not experience noise levels that exceed City of Tustin noise standards.	Prior to approval of final design plans.	Project developer	Tustin Public Works Department	Noise studies were completed. Mitigation has been identified and implemented.
N-3	For new development within the reuse area, the City of Tustin and City of Irvine, as applicable, shall ensure that interior and exterior noise levels do not exceed those prescribed by state requirements and local city ordinances and general plans. Plans demonstrating noise regulation conformity shall be submitted for review and approval prior to building permits being issued to accommodate reuse.	Prior to issuance of building permits.	Project developer	Community Development Department (Tustin and/or Irvine, as applicable)	• **Tustin Field I (Tract 16474)** Noise analysis was prepared for all sensitive noise receptors and recommended mitigation such as sound walls and window/door upgrades were included in the construction drawings. • **Tustin Field II (Tract 16507)** Noise analysis was prepared for all sensitive noise receptors and recommended mitigation such as sound walls and window/door upgrades were included in the construction drawings. • **Columbus Grove (Tract 16582)**

					Noise analysis was prepared for all sensitive noise receptors and recommended mitigation such as sound walls and window/door upgrades were included in the construction drawings. • **Columbus Square (Tract 16581)** Noise analyses were prepared for all sensitive noise receptors and recommended mitigation such as sound walls, window/door upgrades were included in construction drawings • **SOCCCD (ATEP)** Phase 1 of the project is complete. The project was required to comply with the City's noise standards, and will be required for all future phases. • **RSCCD (Sheriff's Training Academy)** The Sheriff's Training Facility project is complete. The project was required to comply with the City's noise standards. The State Division of Architect is responsible for ensuring compliance with City's noise standards, and will be required for all future phases. • **Village of Hope** Noise analyses were prepared for all sensitive noise receptors and recommended mitigation such as sound walls, windows, door upgrades were included in construction drawings. • **Amalfi Apartment Homes – Irvine Company** Noise reports have been submitted and recommended mitigation has been implemented accordingly. • **Anton Legacy – St. Anton Partners**

					Noise reports have been submitted and recommended mitigation has been implemented accordingly. • **Greenwood in Tustin Legacy – Lennar Homes (Formerly CalAtlantic Homes)** Noise reports have been submitted and recommended mitigation has been implemented accordingly. • **The Village at Tustin Legacy – Regency Centers** Noise reports have been submitted and recommended mitigation has been implemented accordingly. • **Orange County Animal Care Facility** The County of Orange is responsible for ensuring compliance with City's noise standards. • **Army Reserve Center** The federal government is responsible for ensuring compliance with City's noise standards. • **Flight at Tustin Legacy – Flight Venture LLC** Noise analysis was prepared for all sensitive noise receptors and recommended mitigation such as sound walls and window/door upgrades were included in the construction drawings. • **Tustin Legacy Linear Park** Not applicable to this site. • **Veterans Sports Park** Not applicable to this site. • **Levity at Tustin Legacy – Lennar Homes of Southern California (formerly CalAtlantic)**

					Noise analysis was prepared for all sensitive noise receptors and recommended mitigation *were* included in the construction drawings. • ***The Landing at Tustin Legacy*** **– Brookfield Homes Southern California LLC** Noise analysis was prepared for all sensitive noise receptors and recommended mitigation *were* included in the construction drawings. • **Remaining Development** Prior to issuance of any building permits, developers of future construction projects may be required submit an acoustical study for review and approval and conditions will be placed on development based on the studies.
N-4	Prior to the connection of Warner Avenue to the North Loop Road or the South Loop Road, the City of Tustin shall conduct an acoustical study to assess reuse traffic noise impacts to existing sensitive receptors adjacent to Warner Avenue, between Harvard Avenue and Culver Drive. If mitigation of reuse traffic noise impacts is required, the City of Tustin and the City of Irvine shall enter into an agreement that defines required mitigation and which allocates the cost of mitigation between the City of Tustin and the City of Irvine on a Fair Share basis.	Prior to approval of final design plans.	City of Tustin and City of Irvine	Tustin Community Development and Public Works Departments	No sensitive receptors adjacent to Warner between Harvard Avenue and Culver Drive currently exist. Further study will be considered upon request of the City of Irvine.
NR-1	Prior to opening the proposed segment of Tustin Ranch Road to traffic, the City will install a sound wall that achieves the exterior (i.e., 65 dBA) residential noise standards identified in the City of Tustin Noise Element. The following are the	Prior to opening the proposed segment of Tustin Ranch Road to traffic	City of Tustin	Community Development and Public Works Departments	• **Tustin Ranch Road** Tustin Ranch Road construction and any required noise mitigation measures are completed.

	required heights of the sound wall in relation to the elevation of the proposed roadway adjacent to the residential receptors (see Exhibit 5.3-2 in Final Supplement to FEIR for receptor locations). • Receptor 1 Existing 6-foot wall • Receptors 2- 4 Proposed 12-foot wall • Receptors 5-6 Proposed 10-foot wall • Receptors 7-8 Proposed 8-foot wall • Receptors 9 through 15feet south of Receptor 21 Proposed 6-foot wall (As amended by Final Supplement #1)				
NR-2	Receptors 1 through 13 requires forced air ventilation (see Exhibit 5.3-2 in Final Supplement to FEIR for receptor locations). If Receptors 1 through 13 do not currently have forced air ventilation, the City shall provide forced air ventilation prior to the opening of the proposed segment of Tustin Ranch Road to traffic. (As amended by Final Supplement #1)	Prior to the opening of the proposed segment of Tustin Ranch Road to traffic	City of Tustin	Community Development Department	• **Tustin Ranch Road** Tustin Ranch Road construction is complete and all requirements have been addressed including any agreements with impacted property owners.

NR-3	Receptors 14 through 21 that have a second story will require forced air ventilation in the second story. If these residential receptors do not currently have forced air ventilation, the City shall provide forced air ventilation in the second story prior to the opening of the proposed segment of Tustin Ranch Road to traffic. (As amended by Final Supplement #1)	Prior to the opening of the proposed segment of Tustin Ranch Road to traffic	City of Tustin	Community Development Department	• **Tustin Ranch Road** Tustin Ranch Road construction is complete and all requirements have been addressed including any agreements with impacted property owners.
NR-4	Prior to the opening of the proposed segment of Tustin Ranch Road to traffic, all second-story windows and/or sliding glass doors in habitable rooms of the residences along the proposed alignment that view the proposed alignment shall be fitted with acoustic-rated window/door assemblies. These assemblies shall have a sound transmission class (STC) rating of no less than 35 and the STC shall be high enough to achieve an interior noise level of no more than 45 dBA CNEL. Non-sensitive uses (e.g., bathrooms) do not require such assemblies. (As amended by Final Supplement #1)	Prior to the opening of the proposed segment of Tustin Ranch Road to traffic	City of Tustin	Community Development Department	• **Tustin Ranch Road** Tustin Ranch Road construction is complete and all requirements have been addressed including any agreements with impacted property owners.
NR-5	All second-story exterior doors in habitable rooms of the residences along the proposed alignment that view the proposed alignment shall be fitted with solid-core assemblies that are well sealed with weather-stripping. (As amended by Final Supplement #1)	Prior to the opening of the proposed segment of Tustin Ranch Road to traffic	City of Tustin	Community Development Department	• **Tustin Ranch Road** Tustin Ranch Road construction is complete and all requirements have been addressed including any agreements with impacted property owners.

NR-6	Prior to opening of the proposed segment of Tustin Ranch Road to traffic, the City will install a 10-foot high wall along the eastern easement of Tustin Ranch Road from Walnut Avenue to the southern property line of the First Baptist Church**.** (As amended by Final Supplement #1)	Prior to the opening of the proposed segment of Tustin Ranch Road to traffic	City of Tustin	Community Development and Public Works Departments	• **Tustin Ranch Road** Tustin Ranch Road construction is complete and all requirements have been addressed including any agreements with impacted property owners.
NR-7	The second-story windows that view the proposed alignment shall be fitted with acoustic-rated window assemblies. The assemblies shall have a sound transmission class (STC) rating of no less than 35 and the STC shall be high enough to achieve an interior noise of no more than 45 dBA CNEL. (As amended by Final Supplement #1)	Prior to the opening of the proposed segment of Tustin Ranch Road to traffic	City of Tustin	Community Development Department	• **Tustin Ranch Road** Tustin Ranch Road construction is complete and all requirements have been addressed including any agreements with impacted property owners.
NR-8	The construction contractor shall notify all property owners and tenants adjacent to the proposed construction activities of the days and hours of operation. Prior to construction activities, the construction contractor shall inspect all structures on adjacent properties to document existing characteristics of the structures. If damages to structures (i.e., residences, pools, decking) occur during construction activities, the property owner shall be financially compensated by the construction contractor to remediate damages. These provisions shall be placed on all construction contract documents. (As amended by Final Supplement #1)	Prior to approval of Plans and Specifications	City of Tustin	Public Works Department	• **Tustin Ranch Road** Tustin Ranch Road construction is complete. All requirements including notifications have been completed.

Implementation Measures for Water Quality					
WQ-1	Prior to the approval of grading plans, the project developers shall provide written evidence to the Department of Public Works that it has filed a Notice of Intent with the State Water Resources Control Board in order to obtain coverage under the latest approved General Construction Permit. Pursuant to the permit requirements, developers shall develop a Stormwater Pollution Prevention Plan (SWPPP) that incorporates Best Management Practices for reducing or eliminating sediment and other construction-related pollutants in the site runoff. (As amended by Addendum)	Prior to approval of grading plans.	Project Developer	Community Development Department (Tustin and/or Irvine, as applicable)	Notice of Intent is on file with Community Development Department and/or Public Works Department.
WQ-2	Prior to approval of a grading plans, the Department of Public Works shall confirm that the contractor's specifications require compliance with the latest approved General Waste Discharge Requirements issued by the Santa Ana Regional Water Quality Control Board to govern discharges from construction dewatering and water line/sprinkler line testing should they occur during construction. Developers shall comply with these regulations including provisions requiring notification, testing and reporting of dewatering and testing-related discharges, which shall mitigate any impacts of such discharges. (As amended by Addendum)	Prior to approval of grading plans.	Project Developer	Community Development Department (Tustin and/or Irvine, as applicable)	Projects were reviewed for compliance with the General Waste Discharge Requirements.

WQ-3	The City of Tustin and major master plan developers of the former MCAS Tustin shall participate in the Regional Board's NSMP Working Group and contribute to funding and implementation of the Work Plan. To mitigate construction-related selenium and nutrient water quality impacts that may result from construction-related groundwater discharges, developers shall implement: (a) feasible and available volume reduction BMPs in accordance with the General NSMP Permit (R8-2004-0021); (b) selenium and nutrient control BMPs that are developed under the Work Plan as of the date of project approval; and (c) selenium and nutrient measures that may be developed under the Work Plan after project approval which are available and feasible to deploy. (As amended by Addendum)	Ongoing	Project Developer	Community Development Department (Tustin and/or Irvine, as applicable)	The City participates in the Regional Board's NSMP Working Group.
WQ-4	To mitigate post-construction surface water and long-term groundwater discharge water quality impacts, prior to issuance of grading permits, developers shall prepare a project WQMP, which shall be submitted to the City of Tustin or City of Irvine, as applicable, for approval. The WQMP shall be prepared in compliance with all MS4 Permit requirements (including DAMP and LIP requirements), and at a minimum shall contain the following elements: a) An Integrated Water Conservation/ Storm Water Runoff and Subdrain Discharge Water Quality	Prior to issuance of grading permits.	Project Developer	Community Development Department (Tustin and/or Irvine, as applicable)	Prior to issuance of grading permits, each development is required to submit a Water Quality Management Plan, which identifies applicable best practices, as applicable.

	Management Program. This program shall integrate into the storm drainage and water quality control system facilities and systems to capture, recycle and conserve low flows, which may include irrigation returns and subdrain discharges, to reduce, to the extent feasible, post-development low flow surface runoff and groundwater discharge volumes. The program shall also implement one or more treatment control technologies developed under the NSMP and available at the time of project approval for nutrient and selenium removal. b) Site Planning and Design BMPs. The WQMP shall incorporate site design BMPs described in the Model WQMP attached as Exhibit 7.11 to the DAMP to the extent feasible and appropriate in light of proposed land uses. c) Source Control BMPs. The WQMP shall incorporate source control BMPs described in the Model WQMP attached as Exhibit 7.11 to the DAMP to the extent feasible and appropriate in light of proposed land use. d) Treatment Control BMPs. The WQMP shall incorporate treatment control BMPs described in the Model WQMP attached as Exhibit 7.11 to the DAMP. (As amended by Addendum)				
WQ-5	As required by DAMP and the MS4 Permit, as well as the Cooperative	Prior to issuance of grading permits.	Project Developer	Community Development	Prior to issuance of grading permits, each development is required to submit a Water Quality

	Agreement DO2-119 between the City of Tustin, OCFCD, and the County of Orange, a Water Quality Technical Report (WQTR) shall be prepared prior to the issuance of grading permits. The WQTR shall quantitatively and qualitatively (as appropriate) assess planned BMPs to be included in the WQMP to confirm that the treatment and hydrologic controls included in the SWPPP and WQMP will be sufficient to assure that project discharges will not cause a violation of applicable water quality standards. (As amended by Addendum)			Department (Tustin and/or Irvine, as applicable)	Management Plan, which identifies applicable best practices, as applicable.

REVISED SPECIFIC PLAN TABLE 3-3
PLANNING AREA TRIP BUDGET[1]

Planning Area	Land Use Category	Units	Non-Residential	
			Amount	ADT
NEIGHBORHOOD A				
1	Institution	KSF	2,151.60	14,331
	Office	KSF	55.53	704
	Neighborhood A Total	**KSF**	**2,207.13**	**15,035**
NEIGHBORHOOD B				
7	Commercial	KSF	103.46	7,024
	Office	KSF	144.84	1,902
	Neighborhood B Total	**KSF**	**248.30**	***8,926***
NEIGHBORHOOD C				
6	Commercial	KSF	57.50	*3,904*
	Neighborhood C Total			***3,904***
NEIGHBORHOOD D				
8	Institution	STU	1,784	3,051
	Commercial (including continuing senior care)	KSF	1,643.01	75,194
	Sub-Total	KSF	1,643.01	78,245
13, *14*	Commercial/*Hotel/Sr. Housing*	KSF/*Room/Unit*	*10/120/521*	*2,657*
	Office	KSF	*443.00*	*4,886*
	Sub-Total			*543*
Neighborhood D Total				
Institution		STU	1,784	3,051
Commercial/*Hotel/Sr. Housing*		KSF/*Room/Unit*	*1,653.01/120/521*	*77,851*
Office		KSF	*443.00*	*4,886*
	Neighborhood D Total			***85,788***
NEIGHBORHOOD E				
9,10	Office	KSF	730.00	8,052
11,12	Commercial	KSF	0	0
	Office	KSF	858.00	9,464
	Sub-Total	KSF	858.00	9,464
Neighborhood E Total				
Office		KSF	1,588.00	17,516
Industrial		KSF	0	0
Neighborhood E Total		**KSF**	**1,588.00**	**17,516**
Neighborhood F				
16	Commercial	KSF	448.00	13,772
17	Commercial	KSF	47.00	1,445
18	Commercial	KSF	117.63	3,616
19	Commercial	KSF	505.60	19,691
Neighborhood F Total				
Commercial		KSF	1,118.23	38,524
Neighborhood F Total		**KSF**	**1,118.23**	**38,524**

Planning Area	Land Use Category	Units	Non-Residential	
			Amount	ADT
Neighborhood G				
15	Commercial	KSF	1,095.2	10,703
Neighborhood G Total		**KSF**	**1,095.2**	**10,703**
TOTAL				**182,851**

Note: Only planning areas with land uses that are included in the trip budget are listed.

REVISED TABLE 4-2
PHASING PLAN REQUIREMENTS

Facility	General Scope	General Triggering Mechanism
Circulation	1) On-site arterial highways and intersections; 2) Off-site arterial highway and intersection improvements; 3) Selected advanced transportation management system (ATMS) facilities.	When cumulative development and associated average daily trips reach ADT development thresholds based on the land use/trip budget presented in the FEIS/EIR or as modified by the FEIS/EIR Addendum or any subsequent amendment.
Bikeways/Trails	1) Class 1 Bikeway along Peters Canyon Channel; 2) On-site Class II Bikeway System.	1) When Peters Canyon Channel is improved. 2) When arterial highways are constructed.
Domestic (Potable) Water	1) Existing housing water distribution lines; 2) New water mains; 3) Abandoned/relocated wells	1) Upon determination by IRWD regarding acceptability of the lines. 2) When arterial highways are constructed; 3) Upon determination by the City and consultation with IRWD.
Reclaimed (Non-Potable) Water	1) New water lines; 2) Existing and new well sites.	1) When arterials highways are constructed; 2) Upon completion of negotiations by City IRWD or developer(s) regarding exchange of well sites.
Sanitary Sewer	1) Existing housing sewer conveyance lines; 2) New sewer mains.	1) Upon determination by the IRWD regarding acceptability of the lines; 2) When arterial highways are constructed.
Storm Drain	1) storm drain systems; 2) Regional flood control channel improvements; 3) Retention basins; 4) Flood plain mitigation.	1) Generally in conjunction with arterial highway construction. Armstrong/Barranca channel improvements upon determination of acceptability as part of development plans. 2) Any project generated Barranca Channel improvements in conjunction with development as needed or determined by the applicable jurisdiction and in consultation with the OCFCD; any necessary project generated Peters Canyon Channel and Santa Ana/Santa Fe channel improvements in conjunction with development as needed or determined by the applicable jurisdiction and in consultation with the OCFCD. 3) As necessary as interim or permanent design in review of development plans. 4) Filing of flood zone map with FEMA prior to any construction.
Electricity	Electric distribution lines.	When arterial highways are constructed.
Natural Gas	Gas distribution lines.	When arterial highways are constructed.
Telephone	Telephone lines.	When arterial highways are constructed.
Cable Television	Cable television distribution lines; fiber optic cables.	When arterial highways are constructed.

REVISED TABLE 4-2
PHASING PLAN REQUIREMENTS
(Continued)

Facility	General Scope	General Triggering Mechanism
Parks	1) Regional park; 2) Community park (31.5 acre); 3) Community park (46 acres), neighborhood parks and private parks; 4) Neighborhood park in Irvine.	1) Site can be used upon transfer to *end user*; improvements will occur per agreement with City of Tustin; 2) Site can be used upon transfer to City; upgrading will occur upon receipt of adequate funding including park development fees; 3) When adequate park development fees are received, subject to development conditions, development agreements and funding availability as applicable; 4) When adequate funding has been secured from assessment district funding; tax-increment or developer-negotiation.
Note: In addition to applicable sections of this Phasing Plan, the provisions of the joint Final EIS/EIR will apply.		

REVISED TABLE 4-3
ON-SITE CIRCULATION IMPROVEMENTS

Road	Limits		Classification
	From	To	
Barranca Parkway	Red Hill Avenue	Jamboree Road	Major Arterial
Edinger Avenue	East of Red Hill Avenue	West of Jamboree Road	Major Arterial
Red Hill Avenue	Barranca Parkway	*Edinger Avenue*	Major Arterial
Tustin Ranch Road	*Walnut Avenue*	Barranca Parkway	Major Arterial
Warner Avenue	Red Hill Avenue	Tustin Ranch Road	Major Arterial
Harvard Avenue	Barranca Parkway	Edinger Avenue	Primary Arterial
Warner Avenue	Tustin Ranch Road	Just east of Park Avenue	Major Arterial
Compass Avenue	*Warner Avenue*	*Tustin Ranch Road*	*Local Collector Street*
Armstrong Avenue	Valencia Avenue (formerly North Loop Road)	Barranca Parkway	Secondary Arterial
Flight Way[1]	*Armstrong Avenue*	*Compass Avenue*	*Local Collector Street*
Harvard Avenue	South of OCTA/SCRRA Railroad	Edinger Avenue	Secondary Arterial
Victory Road (formerly Legacy Road)	Red Hill Avenue	Park Avenue (formerly North Loop Road)	Secondary Arterial
Park Avenue (formerly North Loop Road)	Valencia Avenue	Warner Avenue	Secondary Arterial
Legacy Road (formerly Park Avenue)	*Future Moffett Drive*	Tustin Ranch Road	Secondary Arterial
Legacy Road	*Valencia Avenue*	Moffett Drive	Secondary Arterial
Park Avenue (formerly South Loop Road)	Tustin Ranch Road	Warner Avenue	Secondary Arterial
Kensington Park Drive (formerly West Connector)	Edinger Avenue	Valencia Avenue (formerly North Loop Road)	Secondary Arterial
Valencia Avenue (formerly North Loop road)	Tustin Ranch Road	Park Avenue	Secondary Arterial
Flight Way (formerly Aston Street)	*Flight Private Street*	Barranca Parkway	Local Collector Street
Moffett Drive	Future Legacy Road	Harvard Avenue	Local Collector Street
Sweet Shade	Harvard Avenue	–	Local Collector Street
Lansdowne Road	*Valencia Avenue (formerly* North Loop Road*)*	–	Local Street
Severyns Road	*Valencia Avenue (formerly* North Loop Road*)*	–	Local Street
Helber Way[1]	*Airship Avenue*	*Flight Way*	*Local Street*
Veteran Way[1]	*Warner Avenue*	*Flight Way*	*Local Street*
Airship Avenue[1]	*Armstrong Avenue*	*Legacy Road*	*Local Street*
Peebler Way[1]	*Helber Way*	*Compass Avenue*	*Local Street*
Swaim Way[1]	*Armstrong Avenue*	*Legacy Road*	*Local Street*

[1] New Improvement

REVISED TABLE 4-4
ON-SITE ADT DEVELOPMENT THRESHOLDS

TABLE 4-4
ON-SITE ADT DEVELOPMENT THRESHOLDS

ADT Added	(Cumulative)	Roads Added[1]
27,000	(27,000)	Armstrong Avenue – Valencia Avenue (formerly North Loop Road) to Warner Avenue[2]
		Barranca Parkway – Tustin Ranch Road to Jamboree Road
		Edinger Avenue – along project frontage between Red Hill Avenue and Jamboree Road
		Harvard Avenue – Barranca Parkway to just south of OCTA/SCRRA railroad
		Lansdowne Road
		Marble Mountain Road (completed as "Sweet Shade")[2]
		Valencia Avenue (formerly North Loop Road) – Red Hill Avenue to Kensington Park Drive (formerly West Connector)
		Severyns Road[2]
		Kensington Park Drive (formerly West Connector)
82,800	(109,800)	Park Avenue – Warner Avenue to Tustin Ranch Road[2]
		Barranca Parkway – Tustin Ranch Road to Red Hill Avenue
		Moffett Drive
		Valencia Avenue (formerly North Loop Road) – Kensington Park Drive (formerly West Connector) to *Tustin Ranch Road*
		Red Hill Avenue – Barranca Parkway to just north of Valencia Avenue
		Legacy Road (formerly South Loop Road) – Warner Avenue to Tustin Ranch Road[2]
		Tustin Ranch Road – Walnut Avenue to Barranca Parkway[2]
		Park Avenue (formerly North Loop Road) – Victory Road to Warner Avenue
		Victory Road (formerly Legacy Road) – Park Avenue (formerly North Loop Road) to Tustin Ranch Road[2]
		Warner Avenue – Red Hill Avenue to Jamboree Road[2]
5,000	(114,800)	Legacy Road – Warner Avenue to Tustin Ranch Road[2]
10,000	(124,800)	Flight Way (formerly Aston Street) – *Linear Park* to Barranca Parkway[2]
		Armstrong Avenue – Warner Avenue to Barranca Parkway
26,900	(151,700)	Warner Avenue – Red Hill Avenue to Jamboree Road[2]
		Airship Avenue – Flight Way to Armstrong Avenue
		Flight Way (formerly Carnegie Avenue) – Linear Park to Armstrong Avenue[2]
		Victory Road (formerly Legacy Road) – Park Avenue (formerly North Loop Road) to Tustin Ranch Road[2]
		Park Avenue (formerly North Loop Road) – Moffett Drive to Warner Avenue
88,097	(239,797)	*Flight Way* (formerly South Loop Road) – Armstrong Avenue to Tustin Ranch Road [2]
		Red Hill Avenue/Carnegie Avenue Intersection (East Leg to Linear Park)
		Valencia Avenue/Park Avenue (formerly North Loop Road) – Tustin Ranch Road to Moffett Drive
		East Connector

[1] Roadway shall be constructed prior to the issuance of certificates of occupancy for this phase.
[2] Changes to original FEIS/EIR.

Appendix B
Air Quality, Energy, and Greenhouse Gas Report

AIR QUALITY, ENERGY, AND GREENHOUSE GAS IMPACT REPORT

TUSTIN LEGACY SPECIFIC PLAN AMENDMENT PROJECT

CITY OF TUSTIN, CALIFORNIA

LSA

June 2024

AIR QUALITY, ENERGY, AND GREENHOUSE GAS IMPACT REPORT

TUSTIN LEGACY SPECIFIC PLAN AMENDMENT PROJECT

CITY OF TUSTIN, CALIFORNIA

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June 2024

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LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
ADT	average daily trips
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
BTU	British thermal units
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Commission
CCAA	California Clean Air Act
CCR	California Code of Regulations

CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Tustin
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Orange
CPUC	California Public Utilities Commission
DPM	diesel particulate matter
du/ac	dwelling units per acre
EIA	Energy Information Administration
EIR	Environmental Impact Report
EMFAC	California Emissions Factor Model
EO	Executive Order
GHG	greenhouse gas
GPA	General Plan Amendment
GWh	gigawatt-hour
GWP	global warming potential
H_2S	hydrogen sulfide
HE	Housing Element
HFCs	hydrofluorocarbons
I-5	Interstate 5
IPCC	Intergovernmental Panel on Climate Change

kWh	kilowatt-hour
lbs/day	pounds per day
LCFS	Low Carbon Fuel Standard
LST	Local Significance Threshold
mg/m^3	milligrams per cubic meter
MMT	million metric tons
MMT CO_2e	million metric tons of carbon dioxide equivalent
Modified Project	Specific Plan Amendment
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MT	metric tons
MT CO_2e	metric tons of carbon dioxide equivalent
MT CO_2e/yr	metric tons of carbon dioxide equivalent per year
MT CO_2e/yr/SP	metric tons of carbon dioxide equivalent per year per service population
MW	megawatt
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone (or smog)

OPR	Governor's Office of Planning and Research
PA	Planning Area
PFCs	perfluorocarbons
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in size
PM_{10}	particulate matter less than 10 microns in size
ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
project	Tustin Legacy Specific Plan Project
RCP	Regional Comprehensive Plan
RHNA	Regional Housing Needs Allocation
ROCs	reactive organic compounds
ROGs	reactive organic gases
RPS	Renewables Portfolio Standard
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SLA	Surplus Land Act

SO_2	sulfur dioxide
SO_X	sulfur oxides
SoCalGas	Southern California Gas Company
sq ft	square foot/feet
sq mi	square mile
SR-55	State Route 55
SR-261	State Route 261
TAC	toxic air contaminant
TLSP	Tustin Legacy Specific Plan
UNFCCC	United Nations Framework Convention on Climate Change
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
VOCs	volatile organic compounds
ZEV	zero-emission vehicle
ZNE	zero net energy

INTRODUCTION

This Air Quality, Energy, and Greenhouse Gas (GHG) Impact Report has been prepared to evaluate the potential air quality, energy, and GHG emissions impacts associated with the Tustin Legacy Specific Plan Amendment Project (proposed project or Modified Project) in the City of Tustin (City), County of Orange (County), California. This report follows the guidelines identified by the South Coast Air Quality Management District (SCAQMD) in its *California Environmental Quality Act (CEQA) Air Quality Handbook*,[1] and associated updates. In keeping with these guidelines, this analysis describes existing air quality, including air quality and GHG emissions generated from project-related sources, regional air pollution, and global climate change. In addition, this analysis discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

PROJECT LOCATION

The City of Tustin is located in the central portion of Orange County and is surrounded by the cities of Irvine to the south; Santa Ana to the west; Orange and unincorporated Orange County to the north; and unincorporated Orange County to the east. Major freeways and highways within or bordering the City of Tustin are the Interstate 5 (I-5) freeway through the center, State Route 55 (SR-55) to the west, and State Route 261 (SR-261) to the east. The project location is shown in Figure 1.

The Tustin Legacy Specific Plan (TLSP) area encompasses approximately 1,606 acres which includes 1,511 acres in the southern Tustin and 95 acres in the northeastern Irvine. The TLSP area is generally bound by Red Hill Avenue to the west, Edinger Avenue to the north, Harvard Avenue to the east, and Barranca Parkway to the south. The local vicinity and the boundary of the TLSP area are shown in Figure 2.

The project area consists of three properties spread across two geographically defined areas, referred to as Neighborhoods in the TLSP: Neighborhood D and Neighborhood G.

- The portions of Neighborhood D that are identified within the Housing Element (HE) Sites Inventory include 84.73 acres of the total 190 acres of Neighborhood D North and 124 acres of Neighborhood D South. Parcels identified as housing sites within Neighborhood D North (HE Site 1A) included 39.87 acres, and D South (HE Site 1B) included at 44.86 acres. Neighborhood D North is generally bound by Valencia Avenue to the north, Tustin Ranch Road to the east, Warner Avenue to the south, and Armstrong Avenue to the west. Neighborhood D South is generally bound by Warner Avenue to the north, Tustin Ranch Road to the east, Barranca Parkway to the south, and Armstrong Avenue to the west.

- Neighborhood G is in the northeastern portion of the TLSP site, and the housing element inventory allocates approximately 50 acres of the 271 total acres as being available for

[1] South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993) (accessed April 2024).

residential development. Neighborhood G is generally bound by Edinger Avenue to the north, Jamboree Road to the east, Warner Avenue to the south, and Tustin Ranch Road to the west.

The TLSP Land Use Plan divides the TLSP area into a collection of neighborhoods, each with their own characteristics and set of functions to perform within the TLSP area. Housing Element Sites 1A and 1B are located in "Neighborhood D," and Site 2 is located in "Neighborhood G".

The TLSP area, including the Modified Project area, have a General Plan land use designation of Tustin Legacy Specific Plan (TLSP) and a zoning designation of SP1-Tustin Legacy.

The Land Use Plan for TLSP has been further divided into 13 separate Planning Areas (PA) and numbered sub-planning areas. Neighborhood D includes PAs 8, 13, and 14 and Neighborhood G includes PA 15. The Land Use Plan for TLSP contains ten land use designations, including an overlay designation: Mixed-Use Transit, Mixed-Use Urban, Commercial, Commercial/Business, Residential, Park, Tustin Legacy Park Overlay, Transitional/Emergency Housing, Education Village, and Public Street Right-of-Way. The land use designations have been assigned a PA number. PAs are the basis for the use and development regulations found within the TLSP.

PROJECT DESCRIPTION

The proposed project consists of a Specific Plan Amendment to amend Neighborhoods D South, D North, and G to increase the allowed residential capacity, as shown in Table A, to be consistent with the 2021–2029 Housing Element Update. Changes between the Modified Project (the proposed Specific Plan Amendment) and the Approved Project (the current approved TLSP) are evaluated in this analysis.

The proposed upzoning would add a total of 855 additional residential units to the existing residential capacity of the Modified Project area. The Housing Element Update also included 1,356 buffer units that are intended to make up for any potential units that are not developed on the other Housing Element Update sites. Therefore, a total of 2,211 units have been incorporated into the residential caps of the TLSP Neighborhoods D North, D South, and G. The provision for the density bonus pursuant to the Surplus Land Act (SLA) is appliable to the TLSP area, and therefore, the application of the density bonus has been analyzed through the addition of 2,759 units. Together, the Housing Element Update Regional Housing Needs Allocation (RHNA) units, buffer units, and density bonus units total an additional 4,970 units.

Proposed Specific Plan Amendment

The proposed Specific Plan Amendment (or Modified Project) proposes increased allowed capacity for the future development of residential units within the Modified Project areas, Neighborhood D South, Neighborhood D North, and Neighborhood G, consistent with the approved 2021–2029 Housing Element of the City of Tustin General Plan. Proposed additional capacity would include the housing units allocated the TLSP to accommodate the City's RHNA, buffer units included as part of the Housing Element, and density bonus units available to developers under the SLA. Density bonus is applicable to all undeveloped residential land uses within the TLSP area, including the newly added 6th cycle RHNA units, as well as the remaining buildout capacity of the existing residential land uses within the TLSP area.

Neighborhood D North/Planning Area 8

Neighborhood D (PAs 8, 13, and 14) within the TLSP is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment. According to the approved TLSP, Neighborhood D North is not designated to accommodate any residential.

The 39.87-acre portion of Neighborhood D North identified for increased housing capacity within the 2021–2029 Housing Element include APNs 430-381-38, -41, -91, and -95. The Modified Project would add 555 dwelling units to Neighborhood D buildout capacity, consistent with the adopted Housing Element.

Housing units added to the TLSP area to accommodate the City's RHNA are considered shortfall sites subject to the requirements of Government Code Section 65583.2(h). In order to comply with the requirements of Government Code Section 65583.2(h), the City has identified a portion of Neighborhood D North (APNs 430-381-41 and 430-381-91) to be zoned as exclusively residential land use. These parcels would accommodate a minimum of 203 units. Therefore, the project would include, as part of the Specific Plan Amendment, the designation of APNs 430-381-41 and 430-381-91 as exclusively residential land use. The remaining parcels, 430-381-38 and -95, would be anticipated to accommodate 352 dwelling units (555 total units).

In addition to the 555 units required for the City to meet their RHNA shortfall, 1,356 buffer units were allocated to Neighborhood D North. Buffer units were incorporated as contingency in the event that the City becomes unable to meet their RHNA during the 2021–2029 Housing Element period. These units have been incorporated into the new proposed housing capacity under the TLSP Specific Plan Amendment, providing a total residential maximum buildout of 1,911 units (555 units + 1,356 buffer units).

Neighborhood D South/Planning Areas 13 and 14

Neighborhood D South (PAs 13 and14) is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment. According to the approved TLSP, Neighborhood D South is designated to accommodate 1,672 residential units.

The portion of Neighborhood D South identified for increased housing capacity within the 2021–2029 Housing Element include South Brookfield Tract 18197, Lot 2 and Lots 5–13. The 2021–2029 Housing Element added 100 units to Neighborhood D South, increasing total residential capacity of Neighborhood D South from 1,672 to 1,772.

Neighborhood G/Planning Area 15

Neighborhood G (PA 15) within the TLSP is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment, mixed-use transit-oriented development and residential uses. A maximum of 2,814 dwelling units and 1,095,200 square feet (sq ft) are the identified maximum capacities in Neighborhood G. The Mixed-Use Transit designation provides flexibility for residential, office, commercial retail, and commercial service uses in a vertical or horizontal configuration. This Planning Area also contains a portion of the Tustin Legacy Park Overlay.

The portion of Neighborhood G identified for increased housing capacity within the 2021–2029 Housing Element includes APNs 430-381-27 to -29, 430-391-03, -27, -28, -56, and -59 to -64. The Modified Project would add 200 dwelling units to the Neighborhood G buildout, increasing the capacity from 2,814 to 3,014 residential units.

Nonresidential Uses of TLSP

In addition to the proposed changes above, the TLSP would be amended to reflect updates to nonresidential development by land use type. These changes have been made due to a series of factors, including entitled/built projects, forecasted market conditions, and anticipated future development. Overall, the changes amongst the various nonresidential land uses would result in a balanced condition (see Table A below).

Specific Plan Buildout

Individual sites, or neighborhoods, within the TLSP do not have minimum or maximum densities; however, there is a development cap on the number of housing units in each of the neighborhoods.

The current 2017 TLSP (or Approved Project) identifies a total capacity of 6,813 residential units and 9,532,419 sq ft of nonresidential capacity within the TLSP area. The proposed TLSP identifies a total capacity of 9,024 residential units and 9,532,419 sq ft of nonresidential capacity within the TLSP area (see Table A). More specifically, the Approved Project identifies a total of 4,486 residential units and 3,248,890 sq ft of nonresidential capacity within the Modified Project area. The proposed Modified Project identifies a total capacity of 6,697 residential units and 3,249,500 sq ft of nonresidential capacity within the TLSP area.

While the proposed Specific Plan Amendment would increase the residential capacity by 2,211 units, the provision for State density bonus is appliable to the Modified Project site. The proposed allowed residential capacity increase of 2,211 and the potential of 2,759 density bonus units, for a total of 4,970 units, will be analyzed as part of the project.

Changes in residential and nonresidential development capacity between the Approved Project and proposed Modified Project are captured in Table A. Although no development is proposed as part of the project, for analysis purposes, the project buildout year is assumed to be 2045. Additionally, this analysis assumes that project construction activities could occur anytime beginning January 2025. Construction activities would include site preparation, grading, building construction, paving, and architectural coatings.

Buildout of the Approved Project would generate approximately 100,611 average daily trips (ADT)[2] while buildout of the Modified Project would generate approximately 116,289 ADT, resulting in an increase in 15,678 ADT. Future development would be constructed in compliance with the version of the California Title 24 Energy Efficiency Standards (Title 24 energy standards) and the Title 24 California Green Building Standards Code (CALGreen Code) in effect at the time building permit applications are submitted.

[2] EPD Solutions, Inc. 2024. *Tustin Legacy Specific Plan Trip Generation*.

Table A: Comparison of Approved Project to Modified Project

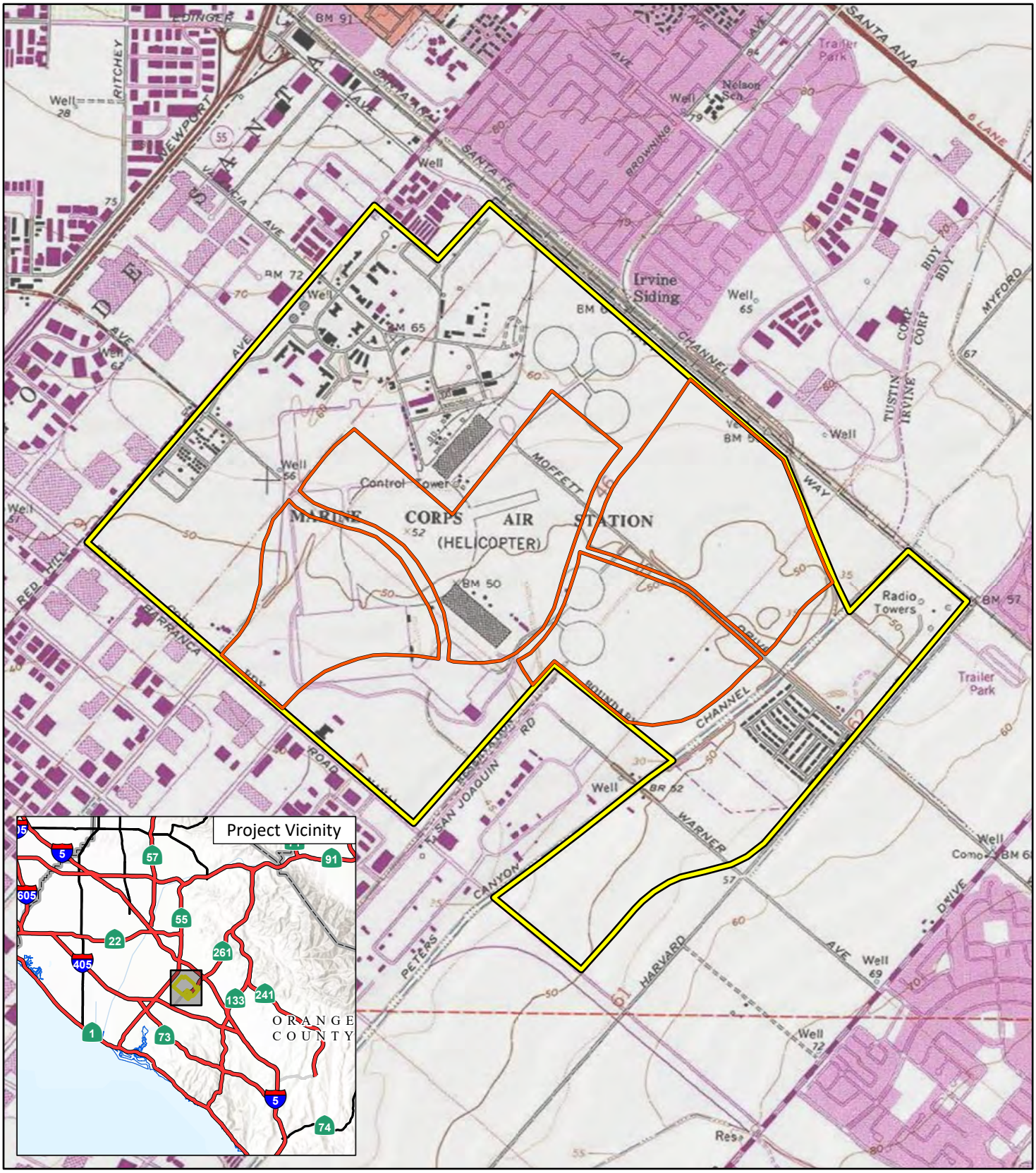
Land Use	Unit	Neighborhood D South (PAs 13 & 14)		Neighborhood D North (PA 8)		Neighborhood G (PA 15)		Approved Total	Proposed Total	Modified Project – Approved Project
		Approved Project[1]	Modified Project[2]	Approved Project[1]	Modified Project[2, 3]	Approved Project[1]	Modified Project[3]			
Single Family Housing	DU	-	117	-	-	-	692	-	809	809
Multi-Family Housing	DU	1,672	1,655	-	1,911	2,814	2,322	4,486	5,888	1,402
Hotel	SF	165,600	36,000	-	36,000	-	-	165,600	72,000	(93,600)
Neighborhood Commercial	SF	-	-	-	-	95,200	-	95,200	-	(95,200)
Community Commercial	SF	20,400	10,000	1,547,690	1,038,690	-	36,500	1,568,090	1,085,190	(482,900)
Office	SF	420,000	443,000	-	473,000	-	704,700	420,000	1,620,700	1,200,700
Continuing Care – Senior Housing	SF	-	117,000	-	-	1,000,000	354,000	1,000,000	471,000	(529,000)
	DU	-	521	-	-	404	270	404	791	387
High School	STU	-	-	1,784	1,784	-	-	1,784	1,784	-
Park – Legacy Park (Passive)	AC	6	6	54	54	31	31	91.0	91.0	-
Park – Sports Park (Active)	AC	-	-	45	45	-	-	45.0	45.0	-
Total Residential	**DU**	**1,672**	**1,772**	**-**	**1,911**	**2,814**	**3,014**	**4,486**	**6,697**	**2,211**
Total Nonresidential	**SF**	**606,000**	**606,000**	**1,547,690**	**1,547,690**	**1,095,200**	**1,095,200**	**3,248,890**	**3,248,890**	**-**
Density Bonus		-	655	-	956	-	1,148	-	2,759	2,759
Potential Residential Buildout w/ Density Bonus		**1,672**	**2,427**	**-**	**2,867**	**2,814**	**4,162**	**4,486**	**9,456**	**4,970**

Source: EPD Solutions, Inc. 2024.
Note :
[1] Approved Project refers to the 2017 TLSP.
[2] Modified Project refers to the proposed TSLP Amendment.
[3] Neighborhood D North includes 1,356 buffer units.
AC = acre

Table A: Comparison of Approved Project to Modified Project

Land Use	Unit	Neighborhood D South (PAs 13 & 14)		Neighborhood D North (PA 8)		Neighborhood G (PA 15)		Approved Total	Proposed Total	Modified Project – Approved Project
		Approved Project[1]	Modified Project[2]	Approved Project[1]	Modified Project[2, 3]	Approved Project[1]	Modified Project[3]			

DU = dwelling unit
PA = Planning Area
SF = square feet
STU = students
TLSP = Tustin Legacy Specific Plan



LSA

TLSP Area

Modified Project Site

FIGURE 1

N

0 1000 2000

FEET

Tustin Legacy Specific Plan Amendment

Project Location

SOURCE: USGS 7.5' Quad - *Tustin (1981)*, CA

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LSA

TLSP Area

Modified Project Site

FIGURE 2

N

0 930 1860

FEET

Tustin Legacy Specific Plan Amendment

Project Site

SOURCE: Google Maps (2023)

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EXISTING LAND USES IN THE PROJECT AREA

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution. The TLSP area is surrounded primarily by residential, commercial, and office uses. The areas adjacent to the TLSP area include the following uses:

- **Northwest:** Business commercial, warehousing, and office uses opposite of Red Hill Avenue;
- **Northeast:** Metrolink train tracks/station Como Channel (stormwater), Tustin Meadows & Peppertree Residential Communities, warehousing and office uses opposite Edinger Avenue;
- **Southwest:** Restaurants, retail, office, and storage uses opposite Barranca Parkway;
- **Southeast:** Tustin Field Residential Community, OC Succulents Nursery, Creekside Education Center, parkland, and Columbus Grove Residential Community;
- **South:** Residential, warehousing, and commercial uses.

The closest sensitive receptor to the TLSP area is The Bowery mixed-use development located approximately 140 feet west of the TLSP boundary. Additionally, residences could be within 50 feet of the perimeter of the Modified Project area.

BACKGROUND

This section provides current background information on air pollutants and their health effects. It also provides current regulatory background information, including information from the California Air Resources Board's (CARB) Air Quality and Land Use Handbook[3] (CARB Handbook); a description of the general health risks of toxics, and the significance criteria for project evaluation. In addition, this section provides background information on energy usage in the project area and provides regulatory background information, including federal, State, and local energy regulations.

AIR POLLUTANTS AND HEALTH EFFECTS

Both State and federal governments have established health-based ambient air quality standards (California Ambient Air Quality Standards [CAAQS] and National Ambient Air Quality Standards [NAAQS], respectively) for six criteria air pollutants:[4] carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by an air district are used to manage total regional emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations and could adversely affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds and the basin-wide context of individual project emissions, there is no known direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_X) and volatile organic compounds (VOCs).

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous outdoor work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses

[3] California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

[4] Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Ozone

Rather than being directly emitted, ozone (O_3 or smog) is formed by photochemical reactions between NO_X and VOCs. Ozone is a pungent, colorless gas. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. Ozone levels peak during the summer and early fall months.

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where it interferes with the transfer of oxygen to body tissues.

Particulate Matter

Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are 10 microns or less in diameter, or PM_{10}. Fine, suspended particulate matter with an aerodynamic diameter of 2.5 microns or less, or $PM_{2.5}$, is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM_{10} and $PM_{2.5}$. These small particles can be directly emitted into the atmosphere as byproducts of fuel combustion; through abrasion, such as tire or brake lining wear; or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses and cars), smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead (Pb) released into the atmosphere. Lead has multiple adverse neurotoxic health effects, and children are at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. On October 15, 2008, the United States Environmental Protection Agency (USEPA) strengthened the NAAQS for lead by lowering it from 1.5 to 0.15 micrograms per cubic meter ($\mu g/m^3$). The USEPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas, resulting in an increase in 76 monitors nationally.

Volatile Organic Compounds

Volatile organic compounds (VOCs) (also known as reactive organic gases [ROGs] and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, however, because VOCs accumulate in the atmosphere more quickly during the winter, when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. There are no attainment designations for VOCs.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the USEPA and the CARB. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

TACs do not have ambient air quality standards (AAQS), but are regulated by the USEPA, the CARB, and the SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[5] High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter (DPM) is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as "on-road" sources such as trucks and buses traveling on freeways and local roadways.

[5] CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October.

Although not specifically monitored, recent studies indicate that exposure to DPM may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined.[6] The technology for reducing DPM emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipated that by 2020, average statewide DPM concentrations will decrease by 85 percent from levels in 2000 with full implementation of the CARB's Diesel Risk Reduction Plan,[7] meaning that the statewide health risk from DPM is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. The CARB 2000 Diesel Risk Reduction Plan is still the most recent version and has not been updated.

Table B summarizes the sources and health effects of air pollutants discussed in this section. Table C presents a summary of CAAQS and NAAQS.

Table B: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	● Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust ● Natural events, such as decomposition of organic matter	● Reduced tolerance for exercise ● Impairment of mental function ● Impairment of fetal development ● Death at high levels of exposure ● Aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO_2)	● Motor vehicle exhaust ● High temperature stationary combustion ● Atmospheric reactions	● Aggravation of respiratory illness ● Reduced visibility ● Reduced plant growth ● Formation of acid rain
Ozone (O_3)	● Atmospheric reaction of organic gases with nitrogen oxides in sunlight	● Aggravation of respiratory and cardiovascular diseases ● Irritation of eyes ● Impairment of cardiopulmonary function ● Plant leaf injury
Lead (Pb)	● Contaminated soil	● Impairment of blood functions and nerve construction ● Behavioral and hearing problems in children
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	● Stationary combustion of solid fuels ● Construction activities ● Industrial processes ● Atmospheric chemical reactions	● Reduced lung function ● Aggravation of the effects of gaseous pollutants ● Aggravation of respiratory and cardiorespiratory diseases ● Increased cough and chest discomfort ● Soiling ● Reduced visibility
Sulfur Dioxide (SO_2)	● Combustion of sulfur-containing fossil fuels ● Smelting of sulfur-bearing metal ores Industrial processes	● Aggravation of respiratory diseases (asthma, emphysema) ● Reduced lung function ● Irritation of eyes ● Reduced visibility ● Plant injury ● Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board (2015).

6 CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October.

7 Ibid.

Table C: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]		Federal Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
Ozone (O_3)[h]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[i]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[i]	24-Hour	-		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	9.0 µg/m³ [o]		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[j]	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	-	
Lead (Pb)[l,m]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average[i]	–		0.15 µg/m³		
Sulfur Dioxide (SO_2)[k]	24-Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m³)	
	1-Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)[k]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[k]	–	
Visibility-Reducing Particles[l]	8-Hour	See footnote n	Beta Attenuation and Transmittance through Filter Tape.	No Federal Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[j]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: California Air Resources Board (2016) (Website: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf).

Table notes are provided on the following page.

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

[h] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24- hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[k] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[l] The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[m] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[n] In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

[o] On February 7, 2024, the federal annual $PM_{2.5}$ standard was revised from 12.0 µg/m^3 to 9.0 µg/m^3.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
USEPA = United States Environmental Protection Agency

ENERGY

Electricity

Electricity is a manmade resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).

According to the most recent data available, in 2022, California's electricity was generated primarily by natural gas (47.5 percent), renewable sources (52.2 percent), large hydroelectric (7.2 percent), nuclear (8.7 percent), coal (<1.0 percent), and other unspecified sources. Total electric generation in California in 2022 was 287,220 gigawatt-hours (GWh), up 3.4 percent from the 2021 total generation of 277,764 GWh.[8]

The Modified Project area is within the service territory of Southern California Edison (SCE). SCE provides electricity to more than 15 million people in a 50,000-square-mile (sq mi) area of Central, Coastal, and Southern California.[9] According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2022 was 85,870 GWh (31,604 GWh for the residential sector and 54,266 GWh for the non-residential sector). Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kilowatt hours [kWh]), including 7,830 GWh for the residential sector and 12,414 GWh for the non-residential sector.[10]

Natural Gas

Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).

8 California Energy Commission (CEC). 2021a. *2020 Total System Electric Generation*. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation (accessed April 2024).

9 Southern California Edison (SCE). 2020. About Us. Website: https://www.sce.com/about-us/who-we-are (accessed April 2024).

10 CEC. 2023b. Electricity Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx and http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed April 2024).

Natural gas consumed in California is used for electricity generation (45 percent), residential uses (21 percent), industrial uses (25 percent), and commercial uses (9 percent). California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply.[11]

The Southern California Gas Company (SoCalGas) is the natural gas service provider for the Modified Project area. SoCalGas provides natural gas to approximately 21.8 million people in a 24,000 sq mi service area throughout Central and Southern California, from Visalia to the Mexican border.[12] According to the CEC, total natural gas consumption in the SoCalGas service area in 2022 was 5,026 million therms (2,230 million therms for the residential sector). Total natural gas consumption in Orange County in 2021 was 573 million therms (572,454,744 therms), including 352 million therms for the residential sector and 221 million therms for the non-residential sector.[13]

Fuel

Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil, gasoline, and diesel.

The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.9 mpg in 2021.[14] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. This act, which originally mandated a national fuel economy standard of 35 mpg by year 2020[15], applies to cars and light trucks of Model Years 2011 through 2020. In March 2020, the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks, further detailed below.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, in 2021, total gasoline consumption in California was 289,918 thousand barrels

11 CEC. 2021b. Supply and Demand of Natural Gas in California. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california (accessed April 2024).

12 Southern California Gas Company (SoCalGas). 2020. About SoCalGas. Website: https://www3.socalgas.com/about-us/company-profile (accessed April 2024).

13 CEC. 2023c. Gas Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx and http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed April 2024).

14 U.S. Department of Transportation (USDOT). "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Website: https://www.bts.dot.gov/bts/bts/content/average-fuel-efficiency-us-light-duty-vehicles (accessed April 2024).

15 U.S. Department of Energy. 2007. "Energy Independence & Security Act of 2007." Website: https://www.afdc.energy.gov/laws/eisa (accessed April 2024).

(12.2 billion gallons) or 1,464.7 trillion British Thermal Units (BTU).[16] Of the total gasoline consumption, 273,289 thousand barrels (11.5 billion gallons) or 1,380.7 trillion BTU were consumed for transportation.[17] Based on fuel consumption obtained from CARB's California Emissions Factor Model, Version 2021 (EMFAC2021), approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024.

GREENHOUSE GASES

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2° Celsius (°C) or 1.1 ± 0.4° Fahrenheit (°F) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[18]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- CO_2
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is

16 U.S. Energy Information Administration (EIA). 2022. California State Profile and Energy Estimates, Data. Website: www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed April 2024).

17 Ibid.

18 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality analysis, the term "GHGs" will refer collectively to the six gases listed above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to carbon dioxide, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table D shows the GWP for each type of GHG. For example, SF_6 is 23,900 times more potent at contributing to global warming than CO_2.

Table D: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-Year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	310
HFC-23	270	11,700
HFC-134a	14	140
HFC-152a	1.4	140
PFC: Tetrafluoromethane (CF_4)	50,000	6,500
PFC: Hexafluoromethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: *Second Update to the Climate Change Scoping Plan: Building on the Framework* (CARB 2017). Website: www.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents (accessed April 2024).
CARB = California Air Resources Board
HFC = hydrofluorocarbons
PFC = perfluorocarbons

The following discussion summarizes the characteristics of the six GHGs and black carbon.

Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as carbon dioxide (CO_2). Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of manmade emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of manmade CO_2, and consequently, the gas is building up in the atmosphere.

In 2021, total annual CO_2 accounted for approximately 81.2 percent of California's overall GHG emissions.[19] Transportation is the single largest source of CO_2 in California, which is primarily comprised of on-road travel. Electricity production, industrial and residential sources also make important contributions to CO_2 emissions in California.

Methane

Methane (CH_4) is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 accounted for approximately 9.8 percent of GHG emissions in California in 2021.[20]

Nitrous Oxide

Nitrous oxide (N_2O) is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. Nitrous oxide emissions accounted for approximately 3.4 percent of GHG emissions in California in 2021.[21]

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride

HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[22] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5.6 percent of GHG emissions in California in 2021.[23]

Black Carbon

Black carbon is the most strongly light-absorbing component of PM formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of $PM_{2.5}$ and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in

19 CARB. 2022. *GHGs Descriptions & Sources in California*. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed April 2024).

20 Ibid.

21 Ibid.

22 The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

23 CARB. 2022. op. cit.

the atmosphere, black carbon can absorb one million times more energy than CO_2.[24] Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles. The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. The CARB estimates that the annual black carbon emissions in California will be reduced approximately 50 percent below 2013 levels by 2030.[25]

[24] U.S. Environmental Protection Agency (USEPA). 2015. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed April 2024).

[25] CARB. 2017b. *Short-Lived Climate Pollutant Reduction Strategy.* March. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed April 2024).

REGULATORY SETTING

AIR QUALITY REGULATIONS

The USEPA and the CARB regulate direct emissions from motor vehicles. The SCAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

Federal Regulations

Federal Clean Air Act

The 1970 federal Clean Air Act (CAA) authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required of areas of the nation that exceed the standards. Under the Clean Air Act, State and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards by specified dates.

State Regulations

California Clean Air Act

In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain CAAQS for CO, O_3, SO_2, and NO_2 by the earliest practical date. The California Clean Air Act provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

California Air Resources Board

The CARB is the State's "clean air agency." The CARB's goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations.

Assembly Bill 2588 Air Toxics "Hot Spots" Information and Assessment Act. Under Assembly Bill (AB) 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances their facilities routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

The California Air Resources Board Handbook. The CARB has developed an Air Quality and Land Use Handbook[26] which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land uses that can produce air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to help land use agencies determine when to further examine project sites for actual health risk associated with the location of new sensitive land uses.

Regional Regulations

South Coast Air Quality Management District

The SCAQMD has jurisdiction over most air quality matters in the South Coast Air Basin (Basin). This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of

[26] CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

Riverside County. The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin and is tasked with implementing certain programs and regulations required by the CAA and the CCAA. The SCAQMD prepares plans to attain CAAQS and NAAQS. SCAQMD is directly responsible for reducing emissions from stationary (area and point) sources. The SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures though educational programs or fines, when necessary.

The proposed project could be subject to the following SCAQMD rules and regulations:[27]

- **Regulation IV - Prohibitions:** This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air pollutant emissions, fuel contaminants, start-up/shutdown exemptions, and breakdown events.
    - **Rule 402 - Nuisance:** This rule restricts the discharge of any contaminant in quantities that cause or have a natural ability to cause injury, damage, nuisance, or annoyance to businesses, property, or the public.
    - **Rule 403 - Fugitive Dust:** This rule requires the prevention, reduction, or mitigation of fugitive dust emissions from a project site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM_{10} emissions to less than 50 µg/m^3 and restricts the tracking out of bulk materials onto public roads. Additionally, Rule 403 requires an applicant to utilize one or more of the best available control measures (identified in the tables within the rule). Control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers, and/or ceasing all activities. Finally, Rule 403 requires that a contingency plan be prepared if so determined by the USEPA. In addition, SCAQMD Rule 403(e), Additional Requirements for Large Operations, includes requirements to provide Large Operation Notification Form 403 N, appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control training class in the South Coast Air Basin.
- **Regulation XI - Source Specific Standards:** Regulation XI sets emissions standards for different sources.
    - **Rule 1113 - Architectural Coatings:** This rule limits the amount of VOCs from architectural coatings and solvents, which lowers the emissions of odorous compounds.

The SCAQMD is responsible for demonstrating regional compliance with AAQS but has limited indirect involvement in reducing emissions from fugitive, mobile, and natural sources. To that end, the SCAQMD works cooperatively with the CARB, the Southern California Association of Governments (SCAG), county transportation commissions, local governments, and other federal and State government agencies. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs) to meet CAAQS and NAAQS. SCAQMD and the SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring

[27] SCAQMD. 2024. South Coast AQMD Rule Book. Website: https://www.aqmd.gov/home/rules-compliance/rules (accessed April 2024).

the area into compliance with federal and State air quality standards. Every 3 years, SCAQMD prepares a new AQMP, updating the previous plan and 20-year horizon.[28]

The Final 2022 Air Quality Management Plan is the currently adopted AQMP. Key elements of the Final 2022 AQMP include the following:

- Calculating and taking credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation)
- A strategy with fair-share emission reductions at the federal, State, and local levels
- Investment in strategies and technologies meeting multiple air quality objectives
- Seeking new partnerships and significant funding for incentives to accelerate deployment of zero-emission and near-zero emission technologies
- Enhanced socioeconomic assessment, including an expanded environmental justice analysis
- Attainment of the 24-hour $PM_{2.5}$ standard in 2019 with no additional measures
- Attainment of the annual $PM_{2.5}$ standard by 2025 with implementation of a portion of the O_3 strategy
- Attainment of the 1-hour O_3 standard by 2022 with no reliance on "black box" future technology (CAA Section 182(e)(5) measures)

The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NO_X technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 8-hour ozone standard.

Southern California Association of Governments

SCAG is a council of governments for Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. It is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy and community development, and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG prepares the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP), which address regional development and growth forecasts and form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air

[28] SCAQMD. 2022. *Final 2022 Air Quality Management Plan*. December 2.

quality forecasts and consistency analysis included in the AQMP. The RTP, RTIP, and AQMP are based on projections originating within local jurisdictions.

Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. SCAG's Regional Comprehensive Plan (RCP) provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the SCAQMD. The RCP is a framework for decision-making for local governments, assisting them in meeting federal and State mandates for growth management, mobility, and environmental standards, while maintaining consistency with regional goals regarding growth and changes. Policies within the RCP include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

SCAG adopted the Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal 2024)[29] on April 4, 2024. Connect SoCal 2024 is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal is an important planning document for the region, allowing project sponsors to qualify for federal funding and takes into account operations and maintenance costs, to ensure reliability, longevity, and cost effectiveness. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in Connect SoCal 2024, would reach the GHG emissions reduction target set by CARB, including the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels).

Local Regulations

City of Tustin General Plan

The City of Tustin addresses air quality in the Conservation, Open Space, and Recreation Element of the City of Tustin General Plan.[30] The Conservation, Open Space, and Recreation Element contains policies that work to improve air quality and reduce particulate emissions. The following policies are applicable to the proposed project:

- **Policy 1.1:** Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.

- **Policy 1.2:** Design safe and efficient vehicular access to commercial land uses from arterial streets to insure efficient vehicular ingress and egress.

[29] Southern California Association of Governments (SCAG). 2024. Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments. Website: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete-040424.pdf?1712261565 (accessed April 2024).

[30] City of Tustin. 2017. *City of Tustin General Plan*. July.

- **Policy 1.3:** Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.
- **Policy 1.7:** Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.
- **Policy 2.1:** Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.
- **Policy 2.2:** Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.
- **Policy 2.6:** Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.
- **Policy 2.7:** Encourage employer rideshare and transit incentives programs by local businesses.
- **Policy 2.8:** Manage non-residential parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

ENERGY REGULATORY SETTING

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation (USDOT), the United States Department of Energy, and the USEPA are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. On the State level, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy.

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies and serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

The CEC is the State's primary energy policy and planning agency. The CEC forecasts future energy needs, promotes energy efficiency, supports energy research, develops renewable energy resources, and plans for/directs state response to energy emergencies. The applicable federal, State, regional, and local regulatory framework is discussed below.

Federal Regulations

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under this Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Corporate Average Fuel Economy (CAFE) Standards

On March 31, 2022, the National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

State Regulations

Assembly Bill 1575, Warren-Alquist Act

In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) or larger; develop energy technologies and renewable energy resources; plan for and direct State responses to energy emergencies; and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (EIRs) to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting

In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies

a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted report includes the *2023 Integrated Energy Policy Report.*[31] The *Integrated Energy Policy Report* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The *Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

Renewable Portfolio Standard

SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all the State's electricity come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[32]

Title 24, California Building Code

Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Non-residential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, with the most recent update consisting of the 2022 CBC that became effective January 1, 2023. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

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31 CEC. 2023a. *2023 Integrated Energy Policy Report*. California Energy Commission. Docket Number: 23-IEPR-01.

32 California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: cpuc.ca.gov/rps (accessed April 2024).

California Green Building Standards Code (CALGreen Code)

In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2022 CALGreen Code standards that became effective January 1, 2023. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce greenhouse gas (GHG) emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

California Energy Efficiency Strategic Plan

On September 18, 2008, the CPUC adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The Plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

Regional Regulations

There are no regional regulations that apply to the proposed project.

Local Regulations

City of Tustin General Plan

The City of Tustin addresses energy in the Conservation, Open Space, and Recreation Element of the City of Tustin General Plan.[33] The Conservation, Open Space, and Recreation Element contains policies that work to reduce energy consumption. The following policies are applicable to the proposed project:

- **Policy 4.1:** Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

[33] City of Tustin. 2017. op. cit.

- **Policy 4.2:** Promote local recycling of wastes and the use of recycled materials.

GREENHOUSE GAS REGULATORY SETTING

This section describes regulations related to GHGs at the federal, State, and local level.

Federal Regulations

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the USEPA has the authority to regulate CO_2 emissions under the CAA. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an endangerment finding action in 2009 under the Clean Air Act, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

In October 2012, the USEPA and the NHTSA, on behalf of the U.S. Department of Transportation, issued final rules to further reduce GHG emissions and improve CAFE standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* 62624). The NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg), limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 *Federal Register* 62630).

On March 31, 2022, the NHTSA finalized the CAFE standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

State Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 1493 (2002)

In a response to the transportation sector's significant contribution to California's CO_2 emissions, AB 1493 was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial

personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of CCAA Preemption was not granted by the USEPA until June 30, 2009. The CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025. The Trump administration revoked California's waiver in 2019; however, the Biden administration restored California's waiver in 2021.

Executive Order S-3-05 (2005)

Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010;
- GHG emissions should be reduced to 1990 levels by 2020; and
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies in order to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads this Climate Action Team (CAT) made up of representatives from State agencies as well as numerous other boards and departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the State's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and the Legislature was released in March 2006, which it laid out 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the executive order. The most recent report was released in December 2020.

Assembly Bill 32 (2006), California Global Warming Solutions Act

California's major initiative for reducing GHG emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) of CO_2e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008, and contains the main strategies California will implement to achieve the reduction of approximately 169 MMT CO_2e, or approximately 30 percent, from the State's projected 2020

emissions level of 596 MMT CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e);
- The Low-Carbon Fuel Standard (15.0 MMT CO_2e);
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e); and
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e).

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and also sets the groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[34] to reflect the 2030 target set by EO B-30-15 and codified by SB 32.

Most recently, the 2022 Scoping Plan[35] was approved in December 2022 and assesses progress towards achieving the SB 32 2030 target and lay out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 97 (2007)

SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code [PRC], Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the *State CEQA Guidelines* in November 2018, which went into effect in December 2018. The amendments do not identify a

34 CARB. 2017a. *California's 2017 Climate Change Scoping Plan*. November.

35 CARB. 2021. *2022 Scoping Plan Update*. May 10. Website: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf (accessed April 2024).

threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008)

SB 375, the Sustainable Communities and Climate Protection Act, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. On September 23, 2010, the CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the Metropolitan Planning Organization (MPOs); the targets require a 6 to 15 percent reduction by 2020 and between 13 to 19 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs such as the Fresno Council of Governments will work with local jurisdictions in the development of Sustainable Communities Strategy (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. Pursuant to SB 375, the Los Angeles/Southern California reduction targets for per capita vehicular emissions were 8 percent by 2020 and are 19 percent by 2035 as shown in Table E.

Table E: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets

Metropolitan Planning Organization	By 2020 (percent)	By 2035 (percent)
San Francisco Bay Area	10	19
San Diego	15	19
Sacramento	7	19
Central Valley/San Joaquin	6–13	13–16
Los Angeles/Southern California	8	19

Source: California Air Resources Board (2018).

Executive Order B-30-15 (2015)

Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act

SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the CPUC for the private utilities and by the CEC for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this legislation requires State energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197

In summer 2016 the Legislature passed, and the Governor signed, SB 32, and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change (IPCC) analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which raises California's Renewables Portfolio Standard (RPS) requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18

EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon

neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill 1279

AB 1279 was signed in September of 2022, and codifies the State goals of achieving net carbon neutrality by 2045 and maintaining net negative GHG emissions thereafter. This bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels by 2045 and directs CARB to work with relevant state agencies to achieve these goals.

Title 24, Part 11, Building Standards Code and CALGreen Code

In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen Code), which sets performance standards for residential and non-residential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code is updated every 3 years and was most recently updated in 2022 to include new mandatory measures for residential as well as non-residential uses; the new measures took effect on January 1, 2023.

California Building Efficiency Standards (Title 24, Part 6)

The California Building Standards Code, or Title 24 of the California Code of Regulations (CCR) contains the regulations that govern the construction of buildings in California. Within the Building Standards Code, two parts pertain to the incorporation of both energy efficient and green building elements into land use development. Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. The current set of standards was adopted in 2022 and applies to projects seeking building permits on or after January 1, 2023. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

Cap and Trade

The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. The cap-and-trade emissions trading program developed by the CARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The cap-and-trade program aims to regulate GHG emissions from the largest producers in the State by setting a statewide firm limit, or cap, on allowable annual GHG emissions. The cap was set in 2013 at approximately 2 percent below the emissions forecast for 2020. In 2014, the cap declined approximately 2 percent. Beginning in 2015 and continuing through

2020, the cap has been declining approximately 3 percent annually. The CARB administered the first auction on November 14, 2012, with many of the qualified bidders representing corporations or organizations that produce large amounts of GHG emissions, including energy companies, agriculture and food industries, steel mills, cement companies, and universities. On January 1, 2015, compliance obligation began for distributors of transportation fuels, natural gas, and other fuels. The cap-and-trade program was initially slated to sunset in 2020 but the passage of SB 398 in 2017 extended the program through 2030.

Executive Order N-79-20

EO N-79-20, which was signed by the Governor on September 23, 2020, sets the following goals for the State: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

Low Carbon Fuel Standard

In January 2007, EO S-01-07 established a Low Carbon Fuel Standard (LCFS). This executive order calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, and that an LCFS for transportation fuels be established for California. The LCFS applies to all refiners, blenders, producers, or importers ("Providers") of transportation fuels in California, including fuels used by off-road construction equipment. In June 2007, CARB adopted the LCFS under AB 32 pursuant to Health and Safety Code Section 38560.5, and, in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of "credits" earned by providing fuels with a lower carbon intensity than the established baseline (or obtained from another party) is equal to or greater than the "deficits" earned from selling higher intensity fuels. In response to certain court rulings, CARB re-adopted the LCFS regulation in September 2015, and the LCFS went into effect on January 1, 2016. In 2018, CARB approved amendments to the regulation to readjust carbon intensity benchmarks to meet California's 2030 GHG reductions targets under SB 32. These amendments include opportunities to promote zero emission vehicle (ZEV) adoption, carbon capture and sequestration, and advanced technologies for decarbonization of the transportation sector.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of ZEVs, into a single package of regulatory standards for vehicle model years 2017 through 2025. The new regulations strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's ZEVs regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of

zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the State. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 40 percent fewer GHGs and 75 percent fewer smog-forming emissions than 2012 model year vehicles.

Executive Order B-48-18

In January 2018, Governor Brown signed EO B-48-18 requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS program, and recommend how to ensure affordability and accessibility for all drivers.

Regional Regulations

South Coast Air Quality Management District

In 2008, the SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the Basin. The Working Group developed several different options that are contained in the SCAQMD 2008 draft guidance document titled, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans,*[36] that could be applied by lead agencies. On September 28, 2010, SCAQMD Working Group Meeting No. 15 provided further guidance, including a tiered approach for evaluating GHG emissions for development projects where the SCAQMD is not the lead agency. The SCAQMD has not presented a finalized version of these thresholds to the governing board.

The SCAQMD identifies the emissions level for which a project would not be expected to substantially conflict with any State legislation adopted to reduce statewide GHG emissions. As such, the utilization of a service population represents the rates of emissions needed to achieve a fair share of the State's mandated emissions reductions. Overall, the SCAQMD identifies a GHG efficiency level that, when applied statewide or to a defined geographic area, would meet the year 2020 and post-2020 emissions targets as required by AB 32 and SB 32. If projects are able to achieve targeted rates of emissions per the service population, the State will be able to accommodate expected population growth and achieve economic development objectives, while also abiding by AB 32's emissions target and future post-2020 targets.

36 SCAQMD. 2008b. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans*.

Southern California Association of Governments

On April 4, 2024, SCAG adopted Connect SoCal 2024.[37] In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled (VMT) from automobiles and light-duty trucks and thereby reduce GHG emissions from these sources. For the SCAG region, CARB has set GHG reduction targets at 8 percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. The 2024–2050 RTP/SCS lays out a strategy for the region to meet these targets. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high-quality transit areas and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles.[38] However, the SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the SCS; SCAG is required to consider local land use controls when drafting the SCS.

The horizon year for Connect SoCal 2024 is 2050 and the plan projects that by 2050, 66 percent of new households and 54 percent of new jobs will be located in Priority Development Areas, either near transit or in walkable communities. The objectives of Connect SoCal 2024 are to create a region with: transit as a backbone of the transportation system; more Complete Streets where people and safety are prioritized; policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals; more housing, jobs, and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces; more housing to address the existing housing need as defined by the RHNA; safe and fluid movement of goods, with a commitment to the broad deployment of zero- and near-zero emission technologies.

Local Regulations

City of Tustin

The City of Tustin has not prepared a Climate Action Plan. The air quality and energy policies from the City of Tustin General Plan, identified above, would also work to reduce GHG emissions.

37 SCAG. 2024. op. cit.
38 Ibid.

SETTING

This section provides the current SCAQMD attainment status, climate and air quality, ambient air quality monitoring results, and GHG emissions inventory.

ATTAINMENT STATUS

The CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for all State standards. An *attainment* designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A *nonattainment* designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An *unclassified* designation signifies that data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O_3, CO, and NO_2 as either does not meet the primary standards, or cannot be classified, or better than national standards. For SO_2, areas are designated as does not meet the primary standards, does not meet the secondary standards, cannot be classified, or better than national standards.

Table F provides a summary of the attainment status for the Basin with respect to NAAQS and CAAQS.

Table F: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1 hour	Nonattainment	Extreme Nonattainment
O_3 8 hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	N/A	Attainment/Unclassified
Lead	Attainment	Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: South Coast Air Quality Management District (2018).
[1] Except in Los Angeles County.
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide

EXISTING CLIMATE AND AIR QUALITY

Air quality in the planning area is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from

the second-largest urban area in the United States gives the South Coast Air Basin some of the worst air pollution in the nation.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s°F. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the Modified Project area is the Tustin Irvine Ranch Station.[39] The monthly average maximum temperature recorded at this station ranged from 66.8°F in January to 85.2°F in August, with an annual average maximum of 75.4°F. The monthly average minimum temperature recorded at this station ranged from 40.2°F in January to 59.1°F in August, with an annual average minimum of 49.4°F. These levels are representative of the project area.

The majority of annual rainfall in the Basin occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. Average monthly rainfall at the Tustin Irvine Ranch Station varied from 0.01 inch in July to 2.67 inches in February, with an annual total of 12.86 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the air appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north, or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and NO_X because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog. Smog is a general term that is naturally occurring fog that has become mixed with smoke or pollution. In this context it is better described as a form of air pollution

[39] Western Regional Climate Center. n.d. Recent Climate in the West. Website: http://www.wrcc.dri.edu, (accessed April 2024).

produced by the photochemical reaction of sunlight with pollutants that have been released into the atmosphere, especially by automotive emissions.

AIR QUALITY MONITORING RESULTS

Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the Modified Project area is located at 1630 Pampas Lane in Anaheim.

Pollutant monitoring results for years 2020 to 2022 at the Anaheim ambient air quality monitoring station, shown in Table G, indicate that air quality in the area has generally been moderate. As indicated in the monitoring results, the federal PM_{10} standard was not exceeded during the 3-year period. The State PM_{10} standard was exceeded five times in 2020, once in 2021, and once in 2022. Similarly, the federal $PM_{2.5}$ standard had 12 exceedances in 2020, 10 exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standard was exceeded six times in 2021, no times in 2021, and once in 2022. The State 8-hour ozone standard was exceeded 16 times in 2020, no times in 2021, and once in 2022. The federal 8-hour standard was exceeded 15 times in 2021, no times in 2021, and once in 2022. The CO and NO_2 standards were not exceeded in this area during the 3-year period. SO_2 data were not available from 2020 to 2022 at air quality monitoring stations in Orange County.

GREENHOUSE GAS EMISSIONS INVENTORY

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

Global Emissions

Worldwide emissions of GHGs in 2020 totaled 22.9 billion metric tons (MT) of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[40]

United States Emissions

In 2021, the year for which the most recent data are available, the United States emitted about 5,586.0 million metric tons of CO_2e (MMT CO_2e) after accounting for sequestration from the land sector. Overall, emissions in 2021 increased by 6 percent since and were 17 percent lower than 2005 levels. The increase in total GHG emissions was driven by an increase in CO_2 emissions from fossil fuel combustion.

[40] United Nations Framework Convention on Climate Change (UNFCCC). 2021. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed April 2024).

Table G: Ambient Air Quality at the Anaheim Monitoring Station

Pollutant	Standard	2020	2021	2022
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		2.3	2.1	2.4
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.7	1.5	1.4
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.142	0.089	0.102
Number of days exceeded:	State: > 0.09 ppm	6	0	1
Maximum 8-hour concentration (ppm)		0.098	0.068	0.077
Number of days exceeded:	State: > 0.07 ppm	16	0	1
	Federal: > 0.07 ppm	15	0	1
Coarse Particulates (PM_{10})				
Maximum 24-hour concentration (µg/m^3)		74.8	63.6	67.0
Number of days exceeded:	State: > 50 µg/m^3	5	1	1
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		30.8	23.4	20.9
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	Yes
	Federal: > 50 µg/m^3	No	No	No
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hour concentration (µg/m^3)		64.8	54.4	33.1
Number of days exceeded:	Federal: > 35 µg/m^3	12	10	0
Annual arithmetic average concentration (µg/m^3)		12.4	11.6	9.9
Exceeded for the year:	State: > 12 µg/m^3	Yes	No	No
	Federal: > 12 µg/m^{3a}	No	No	No
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.071	0.067	0.053
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.013	0.012	0.012
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)				
Maximum 1-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.25 ppm	ND	ND	ND
Maximum 24-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.04 ppm	ND	ND	ND
	Federal: > 0.14 ppm	ND	ND	ND
Annual arithmetic average concentration (ppm)		ND	ND	ND
Exceeded for the year:	Federal: > 0.030 ppm	ND	ND	ND

Sources: CARB (2023) and USEPA (2023).

[a] On February 7, 2024, the federal annual $PM_{2.5}$ standard was revised from 12.0 µg/m^3 to 9.0 µg/m^3. However, since the data presented in Table G is through 2022, it is uses the 12.0 µg/m^3 standard that was in effect through 2022.

µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
ND = No data. There were insufficient (or no) data to determine the value.
ppm = parts per million
USEPA = United States Environmental Protection Agency

In 2021, CO_2 emissions from fossil fuel combustion increased by 7 percent relative to the previous year. This increase in fossil fuel consumption emissions was due primarily to economic activity rebounding after the height of the COVID-19 pandemic. Of the five major sectors—residential and commercial, agricultural, industry, transportation, and electricity generation—transportation accounted for the highest amount of GHG emissions in 2021 (approximately 28 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent.[41]

State of California Emissions

The State emitted approximately 381.3 MMT CO_2e emissions in 2021, 12.1 MMT CO_2e higher than 2020 levels and 49.7 MMT CO_2e below the 2020 GHG limit of 431 MMT CO_2e.[42] CARB estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2021. The next largest sources included industrial sources at approximately 19 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high GWP at 6 percent, and waste at 2 percent.[43]

41 USEPA. 2023. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021. Website: https://www.epa.gov/system/files/documents/2023-04/US-GHG-Inventory-2023-Main-Text.pdf (accessed April 2024).

42 CARB. 2023. *California Greenhouse Gas Emissions for 2000 to 2021, Trends of Emissions and Other Indicators Report*. Website: https://ww2.arb.ca.gov/sites/default/files/2023-12/2000_2021_ghg_inventory_trends.pdf (accessed April 2024).

43 Ibid.

METHODOLOGY

The methodology used to estimate air quality, energy use, and GHG impacts is described below. This analysis evaluates the Modified Project and compares the potential impacts to impacts associated with the Approved Project as described below.

CONSTRUCTION EMISSIONS

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include demolition, site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips.

The California Emissions Estimator Model version 2022.1 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the Modified Project area. Two CalEEMod runs were prepared for the proposed project, one evaluating the Modified Project and one evaluating the Approved Project.

Although no development is proposed as part of the project, for analysis purposes, the project buildout year is assumed to be 2045 for both the Approved Project and the Modified Project. Additionally, this analysis assumes that project construction activities associated with both the Approved Project and the Modified Project could occur anytime beginning January 2025. Construction activities would include site preparation, grading, building construction, paving, and architectural coatings. This analysis also assumes that the Approved Project and Modified Project would comply with SCAQMD Rule 403 measures, consistent with Mitigation Measure (MM) AQ-1 from the 2017 Subsequent Environmental Impact Report for the Tustin Legacy Specific Plan (2017 SEIR). In addition, this analysis assumes the use of Tier 4 construction equipment consistent with 2017 SEIR MM AQ-5, which was also included in CalEEMod. All other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used.

OPERATIONAL EMISSIONS

The air quality analysis includes estimating emissions associated with long-term operation of the proposed project. Consistent with the SCAQMD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project. As identified above, two CalEEMod runs were prepared for the proposed project, one evaluating the Modified Project and one evaluating the Approved Project.

As identified in Table A of the Project Description, the Approved Project includes 4,486 multi-family residential units, 550 hotel rooms, 95,200 sq ft of neighborhood commercial uses, 1,568,090 sq ft of community commercial uses, 420,000 sq ft of office uses, 404 continuing care/senior housing units, a high school with 1,784 students, 91 acres of passive park space, and 45 acres of active park space.

The analysis was conducted using land use codes *Apartments Mid Rise*, *Hotel*, *Strip Mall*, *Regional Shopping Center*, *General Office Building*, *Retirement Community*, *High School*, and *City Park*. Trip generation rates used in CalEEMod for the Approved Project were based on the trip generation rate of 100,611 ADT.

The analysis of the Modified Project included 809 single-family residential units, 8,647 multi-family housing units, 241 hotel rooms, 1,085,190 sq ft of community commercial uses, 1,620,700 sq ft of office uses, 791 continuing care/senior housing units, a high school with 1,784 students, 91 acres of passive park space, and 45 acres of active park space. The analysis was conducted using land use codes *Single Family Housing*, *Apartments Mid Rise*, *Hotel*, *Regional Shopping Center*, *General Office Building*, *Retirement Community*, *High School*, and *City Park* assuming a total trip generation of 116,289 ADT. This analysis also assumes that buildout associated with the Modified Project would not include any woodburning hearths or wood stoves. Where project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate project emissions.

ENERGY USE

The analysis of electricity/natural gas usage is based on the CalEEMod modeling conducted by LSA, which quantifies energy use for project operations. Fuel consumption (diesel fuel and gasoline) from vehicle trips during operation was conservatively estimated for the year 2024 of the proposed project based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB EMission FACtor Model (EMFAC2021) model. Estimates of fuel consumption (diesel fuel and gasoline) from construction trucks and construction worker vehicles were based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB EMFAC2021 model.

The analysis focuses on the three sources of energy that are relevant to the proposed project: electricity, the equipment fuel necessary for project construction, and vehicle fuel necessary for project operations. For the purposes of this analysis, the amount of electricity, construction fuel, and fuel use from operations are quantified and compared to that consumed in Orange County. The electricity use of the proposed project is analyzed as a whole on an annual basis. Electricity use was estimated for the project using default energy intensities by land use type in CalEEMod.

GREENHOUSE GAS ANALYSIS

Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project's contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within the project area. The CalEEMod results were used to quantify GHG emissions generated by the Approved Project and Modified Project.

THRESHOLDS OF SIGNIFICANCE

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under applicable federal or State ambient air quality standards;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) affecting a substantial number of people.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse energy impact if the project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse greenhouse gas emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Certain air districts (e.g., SCAQMD) have created guidelines and requirements to conduct air quality analysis. The SCAQMD's current guidelines, its *CEQA Air Quality Handbook* with associated updates, were followed in this assessment of air quality and GHG impacts for the proposed project.

CRITERIA POLLUTANT THRESHOLDS

SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the South Coast Air Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Table H lists the CEQA significance thresholds for construction and operational emissions established for the Basin. Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which SCAQMD developed and that apply throughout the Basin, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

Table H: Regional Thresholds for Construction and Operational Emissions

Emissions Source	Pollutant Emissions Threshold (lbs/day)					
	VOCs	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Construction	75	100	550	150	55	150
Operations	55	55	550	150	55	150

Source: SCAQMD. Air Quality Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed April 2024).

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

LOCAL MICROSCALE CONCENTRATION STANDARDS

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

GREENHOUSE GAS THRESHOLD

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting held in September 2010 (Meeting No. 15), SCAQMD proposed to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- **Tier 1. Exemptions:** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2. Consistency with a locally adopted GHG Reduction Plan:** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3. Numerical Screening Threshold:** If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. The 10,000 MT of CO_2e per year (MT CO_2e/yr) threshold for industrial uses would be recommended for use by all lead agencies. Under Option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e/yr), commercial projects (1,400 MT CO_2e/yr), and mixed-use projects (3,000 MT CO_2e/yr). Under Option 2, a single numerical screening-level threshold of 3,000 MT CO_2e/yr would be used for all non-industrial projects.

- **Tier 4. Performance Standards:** If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target. Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT CO_2e/yr per service population (for project-level analyses and 6.6 MT CO_2e/yr per service population for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees, per the following equation:

  Rate of Emission: GHG Emissions (MT CO_2e/yr) ÷ Service Population

  The efficiency evaluation consists of comparing the project's efficiency metric to efficiency targets. Efficiency targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in various years based on emissions levels necessary to achieve the statewide GHG emissions reduction goals. A project that results in a lower rate of emissions would be more efficient than a project with a higher rate of emissions, based on the same service population. The metric considers GHG reduction measures integrated into a project's design and operation (or through mitigation). The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

  Relative to the 2035 target date, this target date was selected to be consistent with the GHG reduction target date of SB 375. Overall, GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. This 40 percent reduction was applied to the 2020 targets, resulting in an efficiency threshold for plans of 4.1 MT CO_2e/yr and an efficiency threshold at the project level of 3.0 MT CO_2e/yr.

For the purpose of this analysis, the proposed project will be compared to the SCAQMD screening-level Tier 3 Numerical Screening Threshold of 3,000 MT CO_2e/yr for all land use type projects. Because it is not yet known whether full buildout allowed under the TLSP would occur, this analysis does not compare the project's emissions to the service population threshold. In addition, the proposed project is also evaluated for compliance with the 2022 Scoping Plan and the 2024–2050 RTP/SCS.

IMPACTS ANALYSIS

This section identifies the air quality, energy, and GHG emissions impacts associated with implementation of the proposed project.

AIR QUALITY IMPACTS

Air pollutant emissions associated with the project would occur over the short term from construction activities and over the long term from operational activities associated with the proposed land uses.

Consistency with Applicable Air Quality Plans

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

Consistency with the 2022 AQMP would be achieved if the project is consistent with the goals, objectives, and assumptions in this plan to achieve the federal and State air quality standards. Per SCAQMD's *CEQA Air Quality Handbook*, there are two main indicators of a project's consistency with the AQMP:

- **Indicator 1:** Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or emission reductions in the AQMP.

- **Indicator 2:** Whether the project would exceed the assumptions in the AQMP. The AQMP strategy is, in part, based on projections from local general plans.

Indicator 1: As demonstrated below, the proposed project would result in significant and unavoidable long-term operational pollutant emissions. As such, the proposed project would not be consistent with Indicator 1.

Indicator 2: The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities.

The proposed project involves a Specific Plan Amendment to amend the TLSP to increase the allowed residential capacity, consistent with the 2021–2029 Housing Element Update. As discussed in the Project Description, the proposed upzoning would add a total of 855 additional residential

units to the existing residential capacity of the Modified Project area. The Housing Element Update also included 1,356 buffer units that are intended to make up for any potential units that are not developed on the other Housing Element Update sites. Therefore, a total of 2,211 units have been incorporated into the residential caps of the TLSP Neighborhoods D North, D South, and G. The provision for density bonus pursuant to the Surplus Land Act is appliable to the TLSP area, and therefore, the application of density bonus has been analyzed through the addition of 2,759 units. Together, the Housing Element Update RHNA units, buffer units, and density bonus; units total an additional 4,970 units. The proposed project would not directly result in physical development but upon approval of the Modified Project, the Modified Project area could accommodate 4,970 additional units. As such, this analysis evaluates whether the project would exceed the 2022 AQMP's assumptions.

With respect to determining the proposed project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2024–2050 RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2024–2050 RTP/SCS, in 2019, the City's population was 80,400 residents and the City had 27,000 households and 51,700 jobs. Households are forecast to increase by approximately 6,800 households by 2035 and 7,000 households by 2050 and employment are forecast to increase by approximately 14,600 jobs by 2035 and 19,600 jobs by 2050.[44]

The City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of up to additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. As identified above, the proposed project would accommodate up to 4,970 additional units to help the City meet its RHNA allocation.

The development of 4,970 housing units would result in approximately 14,314 additional residents based on the estimated 2.88 persons per household[45] in Tustin. Future development implemented in accordance with the proposed Specific Plan Amendment would accommodate planned regional housing growth included in the SCAG RHNA and would be required to adhere to the General Plan. Therefore, since the purpose of the proposed project is to accommodate planned regional housing growth included in the SCAG RHNA, the proposed project would not exceed the growth assumptions in the SCAG's 2024–2050 RTP/SCS or the AQMP.

In addition, the proposed project would not include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, it is unlikely that the proposed project would interfere with SCAQMD's goals for improving air quality in the region. The proposed project would not conflict with the 2022 AQMP and, as such, would not jeopardize attainment of the CAAQS and

44 Southern California Association of Governments (SCAG). 2024. *Connect SoCal 2024 Demographics & Growth Forecast.* Website: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-tr-demographics-growth-forecast-final-040424.pdf?1712261839 (accessed May 2024).

45 State of California, Department of Finance. 2023. *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change*. May.

NAAQS in the area under the jurisdiction of the SCAQMD. The proposed project is therefore considered consistent with Indicator 2.

Summary: Based on the discussion above, the proposed project would have the potential to conflict or obstruct implementation of applicable air quality plans under Indicator 1 because the proposed project would result in significant and unavoidable long-term operational pollutant emissions. As discussed below, although there is no feasible mitigation to reduce operational pollutant emissions to a less than significant level, SEIR MM AQ-3, SEIR MM AQ-4, and MM AQ-7 would require future projects to conduct a project-specific air quality assessment and implement all feasible measures to reduce operational impacts. However, impacts would be significant and unavoidable.

Criteria Pollutant Analysis

The Basin is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SCAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The following analysis assesses the potential project-level construction- and operation-related air quality impacts.

Construction Emissions

It is important to note that the proposed project would not, in and of itself entitle, propose, or otherwise require the construction of new development. The proposed project includes a Specific Plan Amendment to increase the allowed residential capacity for the future development of residential units within the Modified Project areas, Neighborhood D South, Neighborhood D North, and Neighborhood G, consistent with the approved 2021–2029 Housing Element of the City of Tustin General Plan.

Construction activities associated with the residential and nonresidential development capacity associated with buildout of the TLSP would be through the buildout year 2045, which would cause short-term emissions of criteria air pollutants. The primary source of emissions is the operation of construction equipment. Before development can take place, a project will be required to be analyzed for conformance with the General Plan, TLSP, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include site preparation, grading, building construction, architectural coating, and paving activities. Construction-related effects on air quality are typically greatest during the grading phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at construction sites. Unless properly controlled, vehicles leaving construction sites would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, whereas fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established Rule 403 (Fugitive Dust), which would require the contractor to implement measures that would reduce the amount of particulate matter generated during the construction period.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_X, VOCs and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for development envisioned under the Approved Project and Modified Project using CalEEMod. As described in the Methodology section above, information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development envisioned under the TLSP would occur through the buildout year 2045. Additionally, this analysis assumes that construction activities could occur anytime beginning January 2025. Table I lists the tentative schedule, and Table J lists the potential construction equipment to be used during project construction under each phase of construction. Construction-related emissions are presented in Table K. CalEEMod output sheets are included in Appendix A.

Table I: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Site Preparation	1/6/2025	8/15/2025	5	160
2	Grading	8/18/2025	3/26/2027	5	420
3	Building Construction	3/29/2027	5/1/2043	5	4200
4	Paving	5/4/2043	6/24/2024	5	300
5	Architectural Coating	12/22/20369	1/6/2046	5	2100

Source: Compiled by LSA assuming construction would start January 2025 and end January 2045 and assuming architectural coating would overlap with building construction activities (May 2024).

Table J: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	3	8	367	0.4
	Tractors/Loaders/Backhoes	4	8	84	0.37
Grading	Excavators	2	8	36	0.38
	Graders	1	8	148	0.41
	Rubber Tired Dozers	1	8	367	0.4
	Scrapers	2	8	423	0.48
	Tractors/Loaders/Backhoes	2	8	84	0.37
Building Construction	Cranes	1	7	367	0.29
	Forklifts	3	8	82	0.2
	Generator Sets	1	8	14	0.74
	Tractors/Loaders/Backhoes	3	7	84	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	81	0.42
	Paving Equipment	2	8	89	0.36
	Rollers	2	8	36	0.38
Architectural Coating	Air Compressors	1	6	37	0.48

Source: Compiled by LSA using CalEEMod defaults (May 2024).
CalEEMod = California Emissions Estimator Model

Table K: Project Construction Emissions

Project Construction	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Approved Project						
Approved Project Peak Daily Emissions	**38.0**	**43.7**	**188.0**	**0.2**	**55.0**	**13.4**
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Exceed?	**No**	**No**	**No**	**No**	**No**	**No**
Modified Project						
Modified Project Peak Daily Emissions	**64.6**	**70.0**	**334.7**	**0.3**	**101.1**	**24.4**
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**
Difference (Modified Project – Approved Project)	**26.6**	**26.3**	**146.7**	**0.1**	**46.1**	**11.0**

Source: Compiled by LSA (May 2024).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

As shown in Table K, construction emissions associated with future development as envisioned under the Modified Project would be higher than construction emissions associated with the Approved Project due to the increase in residential capacity. However, as demonstrated in Table K, construction emissions associated with the Modified Project would not exceed the SCAQMD thresholds for VOCs, NO_X, CO, sulfur oxides (SO_X), $PM_{2.5,}$ or PM_{10} emissions.

In addition, the previously adopted 2017 SEIR mitigation measures would be required to be implemented with each development project under the proposed TLSP Amendment. This includes 2017 SEIR MM AQ-1 that requires consistency with SCAQMD rules 402 and 403, 2017 SEIR MM AQ-2 that requires the use of low VOC architectural coatings, and 2017 SEIR MM AQ-5 that requires use of Tier 4 construction equipment.

2017 SEIR MM AQ-1

During construction of the proposed project, the City, and/or developer and its contractors shall be required to comply with regional rules, which would assist in reducing short-term air pollutant emissions. SCAQMD Rule 402 requires that air pollutant emissions should not create a nuisance off-site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. The City and its contractors shall use the measures presented in SCAQMD Rule 403 Tables 1, 2 and 3 (presented in Tables 5-1, 5-2 and 5-3 of the FEIS/EIR Addendum). This compliance measure shall be included in the contractor's specifications and verified on City projects by the Department of Public Works.

2017 SEIR MM AQ-2

Prior to issuance of grading permits, the project applicant shall use low VOC architectural coatings for all interior and exterior painting operations.

2017 SEIR MM AQ-5

Applicants for new development projects within the Tustin Legacy Specific Plan shall require the construction contractor to use equipment that meets the US Environmental Protection Agency (USEPA) Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower during construction activities, unless it can be demonstrated to the City of Tustin that such equipment is not available.

Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine, as defined by the California Air Resources Board's regulations.

Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for USEPA Tier 4 or higher emissions standards for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City of Tustin. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment

shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board's Rule 2449.

With implementation of 2017 SEIR MM AQ-1, 2017 SEIR MM AQ-2, and 2017 SEIR MM AQ-5, future construction of development projects envisioned under the Modified Project would not result in emissions that would result in a cumulatively considerable net increase of any criteria pollutant for which the project is in nonattainment under an applicable federal or State ambient air quality standard.

Operational Air Quality Impacts

Operational activities associated with buildout envisioned under the Modified Project would result in long-term air pollutant emissions associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment). Before development can take place, a project will be required to be analyzed for conformance with the General Plan, TLSP, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. Buildout associated with the Approved Project would generate approximately 100,611 ADT while buildout associated with the Modified Project would generate approximately 116,289 ADT, resulting in an increase in 15,678 ADT.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. Major sources of energy demand for the proposed project could include building mechanical systems, such as heating and air conditioning. The residential units would be constructed in compliance with the version of the Title 24 energy standards and the CALGreen Code in effect at the time building permit applications are submitted.

Typically, area source emissions consist of direct sources of air emissions located within the Modified Project area, including architectural coatings, consumer products, and the use of landscape maintenance equipment.

Long-term operation emissions associated with development consistent with the Approved Project and Modified Project were calculated using CalEEMod. Model results are shown in Table L below. CalEEMod output sheets are included in Appendix A.

Table L: Project Operational Emissions

Emission Type	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Approved Project						
Approved Project Mobile Sources	215.0	115.7	1,473.0	4.0	464.1	118.7
Approved Project Area Sources	228.1	68.9	416.3	0.5	5.9	5.8
Approved Project Energy Sources	1.3	22.4	12.9	0.1	1.8	1.8
Total Approved Project Emissions	**444.4**	**207.1**	**1,902.2**	**4.6**	**471.7**	**126.3**
SCAQMD Thresholds	**55.0**	**55.0**	**550.0**	**150.0**	**150.0**	**55.0**
Significant?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
Modified Project						
Modified Project Mobile Sources	217.5	120.0	1,551.9	4.2	497.6	127.3
Modified Project Area Sources	391.9	144.5	776.9	1.0	12.2	12.1
Modified Project Energy Sources	2.9	50.0	27.4	0.3	4.0	4.0
Total Modified Project Emissions	**612.3**	**314.5**	**2,356.1**	**5.5**	**513.8**	**143.3**
SCAQMD Thresholds	**55.0**	**55.0**	**550.0**	**150.0**	**150.0**	**55.0**
Significant?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
Increase in Emissions (Modified Project – Approved Project)	**167.9**	**107.4**	**453.9**	**0.9**	**42.1**	**17.0**

Source: Compiled by LSA (May 2024).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

The results shown in Table L indicate that operation-related emissions associated with future development as envisioned under the Modified Project would be higher than emissions associated with the Approved Project due to the increase in residential capacity. The results shown in Table L indicate that emissions associated with future development envisioned under the Modified Project would not exceed the significance criteria for SO_X; however, emissions of VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$ would exceed SCAQMD thresholds.

The exact timing of implementation and phasing for future development envisioned under the TLSP may vary based on a number of factors, including market and economic demands, as well as physical constraints or timing of infrastructure improvements. As such, it is possible that construction activities would still be underway while parts of the project become operational. Since the project is a programmatic level document and the timing of projects that would be developed under the TLSP are unknown at this time, the precise combination of emissions that would occur is unknown. However, since operational emissions associated with buildout envisioned under the Modified Project would exceed SCAQMD thresholds, it is assumed that combined emissions would also exceed the significance threshold established by the SCAQMD for daily project emissions.

The previously adopted 2017 SEIR mitigation measures would be required to be implemented with each development project under the proposed TLSP Amendment. In the previously adopted measures includes the following:

2017 SEIR MM AQ-3

Prior to the issuance of development permits for new non-residential projects with 100 or more employees, and expanded projects where additional square footage would result in a total of 100 or more employees, the City of Tustin and the City of Irvine, as applicable, shall impose a mix of TDM measures which, upon estimation, would result in an average vehicle ridership of at least 1.5, for each development with characteristics that would be reasonably conducive to successful implementation of such TDM measures. These TDM measures may include one or more of the following, as determined appropriate and feasible by each city on a case-by-case basis:

- Establish preferential parking for carpool vehicles.
- Provide bicycle parking facilities.
- Provide shower and locker facilities.
- Provide carpool and vanpool loading areas.
- Incorporate bus stop improvements into facility design.
- Implement shuttles to shopping, eating, recreation, and/or parking and transit facilities.
- Construct remote parking facilities.
- Provide pedestrian circulation linkages.
- Construct pedestrian grade separations.
- Establish carpool and vanpool programs.
- Provide cash allowances, passes, and other public transit and purchase incentives.
- Establish parking fees for single occupancy vehicles.
- Provide parking subsidies for rideshare vehicles.
- Institute a computerized commuter rideshare matching system.
- Provide a guaranteed ride-home program for ridesharing.
- Establish alternative work week, flex-time, and compressed work week schedules.

- Establish telecommuting or work-at-home programs. Provide additional vacation and compensatory leave incentives.
- Provide on-site lunch rooms/cafeterias and commercial service such as banks, restaurants, and small retail.
- Provide on-site day care facilities.
- Establish an employee transportation coordinator(s).

2017 SEIR MM AQ-4

If not required under each individual development's TDM plan, the City of Tustin and the City of Irvine, as applicable, shall implement the following measures, as determined appropriate or feasible by each city on a case by case basis:

- Reschedule truck deliveries and pickups for off peak hours.
- Implement lunch shuttle service from a worksite(s) to food establishments.
- Implement compressed work week schedules where weekly work hours are compressed into fewer than five days, such as 9/80, 4/40, or 3/36.
- Provide on site child care and after school facilities or contribute to off site developments within walking distance.
- Provide on site employee services such as cafeterias, banks, etc.
- Implement a pricing structure for single occupancy employee parking, and/or provide discounts to ride sharers.
- Construct off site pedestrian facility improvements such as overpasses and wider sidewalks.
- Include retail services within or adjacent to residential subdivisions.
- Provide shuttles to major rail transit centers or multi modal stations.
- Contribute to regional transit systems (e.g., right of way, capital improvements, etc.).
- Synchronize traffic lights on streets impacted by development.

- Construct, contribute, or dedicate land for the provision of off site bicycle trails linking the facility to designated bicycle commuting routes.
- Include residential units within a commercial development.
- Provide off site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on site improvements, such as bicycle paths.
- Include bicycle parking facilities such as bicycle lockers.
- Include showers for bicycling and pedestrian employees' use.
- Construct on site pedestrian facility improvements, such as building access, which is physically separated from street and parking lot traffic, and walk paths.

In addition to 2017 SEIR MM AQ-3 and 2017 SEIR MM AQ-4, MM AQ-7 would require the implementation of all feasible measures to reduce operational impacts associated with future residential development envisioned under the Modified Project.

MM AQ-7 Prior to issuance of building permits, the City of Tustin shall identify project design details and specifications, where feasible, to document implementation and compliance with the following emission reduction measures. Implementation of the following measures, where applicable, are considered to be applicable, feasible, and effective in reducing criteria pollutant emissions generated by the project:

- Exceed Title 24 standards by 20 percent.
- Install programmable thermostat timers and smart meters.
- Install energy efficient appliances and high-efficiency electric hot water heaters.
- Incorporate design features (e.g., pollution prevention, pollution reduction, barriers, landscaping, ventilation systems, or other measures) at the proposed residential uses to minimize the potential impacts of air pollution on sensitive receptors.
- Incorporate fuel-efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, boiler units, and low or zero-emitting architectural coatings. Utilize only Energy Star heating, cooling, and lighting devices, and appliances.

- Utilize energy-efficient design features, including appropriate site orientation, use of lighter color roofing and building materials, and use of deciduous shade trees and windbreak trees to reduce fuel consumption for heating and cooling.
- Provide bicycle parking/storage facilities on site. Bicycle parking facilities should be near destination points and easy to find. At least one bicycle parking space for every 20 vehicle parking spaces should be provided.
- Provide building access and paths which are physically separated from street parking lot traffic and that eliminate physical barriers such as walls, berms, landscaping and slopes that impede the use of pedestrians, bicycle facilities, or public transportation vehicles.
- Link culs-de-sac and dead-end streets to encourage pedestrian and bicycle travel.
- Provide traffic reduction modifications to Project roads, such as: narrower streets, speed platforms, bulb-outs, and intersection modifications designed to reduce vehicle speeds and to encourage pedestrian and bicycle travel.
- Provide preferential parking spaces near the entrance of buildings for those who carpool/vanpool/rideshare and provide signage.
- Install 240-volt electrical outlets or Level 3 chargers in parking lots and garages that would enable charging of electric vehicles.
- Maximize the planting of trees in landscaping and parking lots.
- Install outdoor electrical outlets to promote the use of electric lawn mowers and leaf blowers.

While these mitigation measures would reduce criteria air pollutant emissions generated during operational activities associated with future development envisioned under the proposed TLSP Amendment, there is currently not enough information to quantify emissions of specific development that may take place under the TLSP. Without quantification to guarantee a less than significant finding, future development projects may still exceed the SCAQMD regional significance thresholds. Therefore, operation of the proposed project would result in a significant impact related to a cumulatively considerable net increase of any criteria pollutant for which the Basin is in nonattainment under an applicable federal or State ambient air quality standard. Impacts would be significant and unavoidable.

Long-Term Microscale (CO Hot Spot) Analysis

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Anaheim monitoring station, the closest station to the City of Tustin, showed a highest recorded 1-hour concentration of 2.4 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 1.7 ppm (the State standard is 9 ppm) during the past 3 years (Table G). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Buildout associated with the Approved Project would generate approximately 100,611 ADT, including 5,118 AM peak hour trips and 338 PM peak hour trips while buildout associated with the Modified Project would generate approximately 116,289 ADT, including 8,370 AM peak hour trips and 11,123 PM peak hour trips. As such, the Modified Project would result in an increase in 15,678 ADT, including 3,251 AM peak hour trips and 1,777 PM peak hour trips. The proposed project would not result in any operational deficiencies to the surrounding roadway system. The evaluation of the study area intersections shows that the addition of traffic associated with new development allowed under the Modified Project is not expected to create significant level of service changes under buildout conditions. Therefore, project traffic would not create any significant adverse impacts to nearby intersections.

Therefore, given the extremely low level of CO concentrations in the City, and lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly or result in the CO concentrations exceeding the State or federal CO standards.

Health Risk on Nearby Sensitive Receptors

As discussed previously, the proposed project would not, in and of itself entitle, propose, or otherwise require the construction of new development. The proposed project includes a Specific Plan Amendment to increase the allowed residential capacity for the future development of residential units within the Modified Project areas, Neighborhood D South, Neighborhood D North, and Neighborhood G, consistent with the approved 2021–2029 Housing Element of the City of Tustin General Plan.

The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors such as residential land uses in the immediate vicinity of the opportunity sites as a result of construction and operational activities. The thresholds are based on standards established by the SCAQMD in its Localized Significance Thresholds (LST) Methodology[46] and are measured against construction and operational emissions that occur on a specific project site. These emissions are primarily generated from heavy-duty construction equipment and grading and trenching activities. However, the LSTs are applicable to projects at the project-specific level and are not applicable to programmatic documents, such as the proposed project. Construction and operational emissions associated with the proposed project, would however, have the potential to cause or contribute to localized air quality impacts to nearby residential land uses. Localized construction impacts of future residential development could potentially exceed the LSTs, particularly for construction of areas larger than 5 acres or areas with more intense construction activities. To address this, regulatory measures (e.g., SCAQMD Rule 201 for a permit to operate, Rule 403 for fugitive dust control, Rule 1113 for architectural coatings, Rule 1403 for new source review, and CARB's Airborne Toxic Control Measures) are currently in place, and mitigation would be imposed at the project level, which may include use of special equipment.

Although LSTs are applicable to projects at the project-specific level and are not applicable to programmatic documents, such as the proposed project, this analysis conservatively evaluates localized construction emissions associated with development consistent with the proposed project based on the SCAQMD's LST Methodology. LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For the proposed project, the appropriate SRA for the LST is the nearby Central Orange County (SRA 17). SCAQMD provides LST screening tables for 25, 50, 100, 200, and 500-meter source-receptor distances. Although the closest existing sensitive receptors are located approximately 140 feet from the project area boundary; this analysis conservatively assumes the SCAQMD's minimum distance of 25 meters to account for future sensitive receptors that may be constructed within 25 meters. It is also assumed that the maximum daily disturbed acreage during construction would be 5 acres. The results of the analysis are shown in Table M below.

Table M: Project Localized Construction Emissions (lbs/day)

Source	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Project Construction Emissions	19.4	35.3	7.8	4.0
Localized Significance Threshold	183.0	1,253.0	13.0	7.0
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (May 2024).
CO= carbon monoxide
lbs/day = pounds per day
NO_x= nitrogen oxides
$PM_{2.5}$= particulate matter less than 2.5 microns in size
PM_{10}= particulate matter less than 10 microns in size

The results of the LST analysis, summarized in Table M, indicates that the project would not result in an exceedance of the SCAQMD LSTs during project construction. In addition, the previously adopted 2017 SEIR mitigation measures would be required to be implemented with each development

[46] SCAQMD. 2021. Localized Significance Thresholds. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds (accessed April 2024).

project under the proposed TLSP Amendment. Implementation of 2017 MM AQ-6 requires a project-specific assessment of potential project-related localized quality impacts and implementation of feasible mitigation measures to reduce emissions.

2017 SEIR MM AQ-6 Prior to the issuance of grading permits, the applicants for individual new developments shall evaluate localized construction-related air quality impacts. Localized construction emissions shall be evaluated to the South Coast Air Quality Management District's Localized Significance Thresholds for construction. Applicable mitigation measures to reduce potential localized construction-related air quality impacts shall be included in the evaluation, as necessary, to minimize impacts to the extent feasible and shall be implemented. The evaluation shall be submitted to the City of Tustin for review. In addition, all recommended mitigation measures shall be noted on all construction plans submitted to the City of Tustin Building and Public Works Department for verification.

It should be noted that the amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. A dispersion modeling analysis would be necessary to calculate health risk from project implementation. However, since it is not possible to translate the amount of an unknown future specific project's emissions to a particular concentration, it is not possible to calculate the risk factor for a particular health effect at the time of this analysis.

Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Particulate matter can also lead to a variety of health effects in people. These include premature death of people with heart or lung disease, heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Regional emissions of criteria pollutants contribute to these known health effects. The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals and that they are not exposed to elevated concentrations of criteria pollutants in the Basin. To achieve the health-based standards established by the USEPA, the SCAQMD prepares an AQMP that details regional programs to attain the ambient air quality standards.

Although the analysis for the proposed project identifies that construction emissions associated with development envisioned as part of the proposed project would not exceed the SCAQMD's thresholds for VOCs, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10} emissions, it should be noted that not exceeding the SCAQMD's numeric regional mass daily thresholds does not necessarily correspond to a determination for health risk impacts to sensitive receptors. This is because the mass daily thresholds are in pounds per day emitted into the air, whereas health effects are determined based on the concentration of emissions in the air at a particular receptor (e.g., ppm by volume of air, or $\mu g/m^3$ of air). State and federal ambient air quality standards were developed to protect the most susceptible population groups from adverse health effects and were established in terms of parts per million or micrograms per cubic meter for the applicable emissions.

However, the SCAQMD acknowledges that they have only been able to correlate potential health outcomes for very large emissions sources; specifically, 6,620 pounds per day (lbs/day) of NO_X, and

89,180 lbs/day of VOCs were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to ozone.[47] As identified in Table K above, construction associated with the Modified Project would generate a maximum of 70.0 lbs/day of NO_X and 64.6 lbs/day of VOCs and as shown in Table L, operation of the proposed project would generate a maximum of 314.5 lbs/day of NO_X and 612.3 lbs/day of VOCs. Therefore, it is not expected that any future development associated with the proposed project would generate 6,620 lbs/day of NO_X or 89,180 lbs/day of VOC emissions. Therefore, emissions associated with the proposed project are not sufficiently high enough to correlate health effects on a Basin-wide level.

Current scientific, technological, and modeling limitations prevent the relation of expected adverse air quality impacts to likely health consequences. For this reason, this discussion explains why it is not feasible to provide such an analysis.

The proposed project includes a Specific Plan Amendment to increase the allowed residential capacity for the future development of residential units within the Modified Project areas, Neighborhood D South, Neighborhood D North, and Neighborhood G, consistent with the approved 2021–2029 Housing Element of the City of Tustin General Plan. As discussed above, once a specific development project is proposed, the project would be reviewed in accordance with CEQA and would require further evaluation at the project level to demonstrate whether emissions would exceed SCAQMD's LSTs and require project-specific mitigation.

In addition, the project would be required to comply with SCAQMD standard conditions, including Rule 403 (Fugitive Dust) to control fugitive dust and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Furthermore, any necessary mitigation would be imposed at the project level once such future projects are proposed.

Asbestos

Naturally occurring asbestos (NOA) refers to the asbestos mineral as a natural component of soils or rocks, as opposed to asbestos in commercial products or other processing operations. Ultramafic rocks may contain asbestos or asbestos-like materials. Naturally occurring asbestos can be released from rocks or soils by routine human activities, such as construction, mining, agriculture, or natural weathering processes. If NOA is disturbed and fibers are released into the air it may become a health risk from inhalation. According to the California Geological Survey, no such rock has been identified in the project vicinity[48]. When demolition is proposed during construction, the demolition of existing buildings may expose asbestos used in building materials. The proposed project would not include any demolition. Therefore, the potential risk for naturally occurring asbestos during project construction is small and would not be significant.

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47 Supreme Court of California. 2015. *Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno, Plaintiffs and Appellants, v. County of Fresno, Defendant and Despondent, and Friant Ranch, L.P., Real Part in Interest and Despondent.* April.

48 California Geological Survey, n.d. Areas with Potential for Naturally Occurring Asbestos. Website: https://www.arcgis.com/apps/webappviewer/index.html?id=da4b648958844134adc25ff002dbea1c (accessed April 2024).

Odors

During construction of future development envisioned under the proposed project, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, development envisioned under the proposed project would not be a source of odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) affecting a substantial number of people.

ENERGY IMPACTS

The following describes the potential impacts regarding energy resources that could result from implementation of the proposed project.

Energy Consumption

The proposed project would increase the demand for energy through day-to-day operations and fuel consumption associated with project construction. This section discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

Construction Energy Use

Construction activities associated with the residential and nonresidential development capacity associated with buildout of the TLSP would be through the buildout year 2045, which would cause fuel consumption associated with construction activities. The primary source of emissions is the operation of construction equipment. Before development can take place, a project will be required to be analyzed for conformance with the General Plan, TLSP, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include grading, site preparation, building construction, architectural coating, and paving activities. Construction activities require energy associated with the manufacture and transportation of building materials, grading activities, and building construction. Construction activities also typically require electricity to power construction-related equipment and do not involve the consumption of natural gas.

Transportation energy represents the largest energy use during construction and would be from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and vendor trucks hauling materials to and from a site would be anticipated to use diesel fuel, whereas construction workers traveling to and from a site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and the travel mode.

Estimates of fuel consumption (diesel fuel and gasoline) from construction equipment, construction trucks, and construction worker vehicles were based on default construction equipment assumptions and trip estimates from CalEEMod and fuel efficiencies from EMFAC2021. Fuel consumption estimates are presented in Table N. CalEEMod output sheets are included in Appendix A, and detailed energy calculations are included in Appendix B.

Table N: Energy Consumption Estimates during Construction

Energy Type	Total Energy Consumption	Annual Energy Consumption
Approved Project		
Approved Project Diesel Fuel (total gallons)	11,271,055.1	563,552.8
Approved Project Gasoline (total gallons)	19,386,047.1	969,302.4
Modified Project		
Modified Project Diesel Fuel (total gallons)	14,444,946.8	722,247.3
Modified Project Gasoline (total gallons)	35,955,276.2	1,797,763.8
Increase in Energy Usage (Modified Project – Approved Project)		
Increase in Diesel Fuel (total gallons)	3,173,891.7	158,694.6
Increase in Gasoline (total gallons)	16,569,229.1	828,461.5

Source: Compiled by LSA (May 2024).
Note: The annual energy consumption was calculated by averaging the total energy consumption over the approximately 20-year buildout period.

As indicated in Table N, development envisioned under the Modified Project would consume approximately 722,247.3 gallons of diesel fuel per year and approximately 1,797,763.8 gallons of gasoline per year during construction, which is an increase of 158,694.6 gallons of diesel fuel per year and approximately 828,461.5 gallons of gasoline per year over the Approved Project. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, the energy usage associated with buildout envisioned under the Modified Project would increase the annual construction generated fuel use in Orange County approximately by approximately 0.5 percent for diesel fuel usage and by 0.1 percent for gasoline fuel usage. As such, project construction would have a minimal effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Orange County's overall use of the State's available energy resources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. In addition, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. The project would not cause or result in the need for additional energy facilities or an additional or expanded delivery system. For these reasons, fuel consumption during construction would not be inefficient, wasteful, or unnecessary.

Operational Energy Use

Operational activities associated with the additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the proposed project would result in energy demand associated with natural gas use, electricity consumption, and fuel used for vehicle trips. Energy consumption was estimated for the proposed project using default energy

intensities by land use type in CalEEMod. In addition, the proposed project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. Trip generation rates for the proposed project were based on the project's trip generation estimates. Buildout associated with the Approved Project would generate approximately 100,611 ADT while buildout associated with the Modified Project would generate approximately 116,289 ADT, resulting in an increase in 15,678 ADT. The amount of operational fuel use was estimated using CARB's EMFAC2021 model, which provided projections for typical daily fuel usage in Orange County.

Electricity, natural gas, and fuel usage estimates associated with the proposed project are shown in Table O.

Table O: Energy Consumption Estimates during Operation

Energy Type	Annual Energy Consumption
Approved Project	
Electricity Consumption (kWh/year)	45,612,144
Natural Gas Consumption (therms/year)	867,801
Gasoline (gallons/year)	2,505,724.1
Diesel Fuel (gallons/year)	263,739.9
Modified Project	
Electricity Consumption (kWh/year)	82,337,291
Natural Gas Consumption (therms/year)	1,946,109
Gasoline (gallons/year)	9,171,101.1
Diesel Fuel (gallons/year)	965,303.8
Increase in Energy Usage (Modified Project – Approved Project)	
Electricity Consumption (kWh/year)	36,725,147
Natural Gas Consumption (therms/year)	1,078,308
Gasoline (gallons/year)	6,665,377
Diesel Fuel (gallons/year)	701,564

Source: Compiled by LSA (May 2024).
kWh = kilowatt-hours

As shown in Table O, the estimated electricity demand associated with development consistent with the Modified Project is 82,337,291 kWh per year, which is an increase in 36,725,147 kWh per year over the Approved Project. Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kWh). Therefore, operation of the proposed project would increase the annual electricity consumption in Orange County by approximately 0.4 percent.

Additionally, as shown in Table O, the estimated natural gas demand associated with development consistent with the Modified Project is 1,946,109 therms per year, which is an increase in 1,078,308 therms per year over the Approved Project. Total natural gas consumption in Orange County in 2022 was 573 million therms (572,454,744 therms). Therefore, operation of the proposed project would increase the annual natural gas consumption in Orange County by approximately 0.3 percent.

Electrical and natural gas demand associated with future operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. All future development would be required to adhere to all

federal, State, and local requirements for energy efficiency, including the latest Title 24 standards. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting, which would reduce energy usage.

Buildout envisioned under the Modified Project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. As shown in Table O, the increase in fuel use associated with the vehicle trips generated by the proposed project is estimated at approximately 9,171,101.1 gallons of gasoline and 965,303.8 gallons of diesel fuel per year, which is an increase in 6,665,377 gallons of gasoline and 701,564 gallons of diesel fuel per year over buildout associated with the Approved Project. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, vehicle trips associated with the buildout envisioned under the Modified Project would increase the annual fuel use in Orange County by approximately 0.8 percent for gasoline fuel usage and approximately 0.6 percent for diesel fuel usage. Fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Although future development, as envisioned under the Modified Project would result in an increase in demand for electricity, this increase would not require SCE to expand or construct infrastructure that could cause substantial environmental impacts because all of the opportunity sites are already served by utilities or directly adjacent to existing urban development. Similarly, natural gas infrastructure is not anticipated due to cumulative development. Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development and to the total number of vehicle trips and VMT throughout Orange County and the region. As such, the buildout associated with the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

Conflict with Renewable Energy or Energy Efficiency Plans

In 2002, the Legislature passed SB 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the Integrated Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for ZEVs and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The CEC's *2023 Integrated Energy Policy Report* provide the results of the CEC's assessments of a variety of energy issues facing California. As indicated above, energy usage associated with future development envisioned under the Modified Project during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County. In addition,

energy usage associated with operation of the Modified Project would be relatively small in comparison to the overall use in Orange County, and the State's available energy resources. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC's Integrated Energy Policy Report. Additionally, as demonstrated above, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy.

GREENHOUSE GAS IMPACTS

This section describes the potential GHG impacts associated with implementation the proposed project.

Generation of Greenhouse Gas Emissions

This section describes the proposed project's construction- and operational-related GHG emissions and contribution to global climate change. The SCAQMD has not addressed emission thresholds for construction in its *CEQA Air Quality Handbook*; however, the SCAQMD requires quantification and disclosure. Thus, an evaluation of the project's impacts related to the release of GHG emissions for both construction and operational phases of the project is described below.

Short-Term Greenhouse Gas Emissions

Construction activities associated with the construction of residential and nonresidential development capacity would cause short-term GHG emissions. Construction activities with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As indicated above, the SCAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. The SCAQMD then requires the construction GHG emissions to be amortized over the life of the project, defined by the SCAQMD as 30 years[49], added to the operational emissions, and compared to the applicable interim GHG significance threshold tier.

Using CalEEMod, it is estimated that development envisioned under the Approved Project would generate approximately 114,287.0 MT CO_2e during construction of the project. When annualized over the 30-year life of the project, annual emissions would be 3,809.6 MT CO_2e.

[49] The SCAQMD has identified the average operational lifespan of buildings to be 30 years. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf (accessed April 2024).

Additionally, it is estimated that development envisioned under the Modified Project would generate approximately 201,303.0 MT CO_2e during construction of the project. When annualized over the 30-year life of the project, annual emissions would be 6,710.0 MT CO_2e.

Long-Term Greenhouse Gas Emissions

Operational activities associated with the residential and nonresidential development capacity consistent with the buildout envisioned as part of the TLSP would result in long-term GHG emissions associated with mobile sources (e.g., vehicle trips), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance within the Modified Project area. Energy source emissions would be generated at off-site utility providers because of increased electricity demand generated by the project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Following guidance from the SCAQMD, GHG emissions were estimated for the Approved Project and Modified Project using CalEEMod. Table P shows the calculated GHG emissions.

Table P: Greenhouse Gas Emissions (MT/yr)

Emissions Source	Operational Emissions (MT/yr)			
	CO_2	CH_4	N_2O	CO_2e
Approved Project				
Approved Project Mobile Sources	55,046.0	2.4	2.4	55,820.0
Approved Project Area Sources	1,142.9	<0.1	<0.1	1,144.5
Approved Project Energy Sources	15,610.0	1.1	0.1	15,665.0
Approved Project Water Sources	790.2	13.2	0.3	1,213.4
Approved Project Waste Sources	641.7	64.1	0.0	2,245.2
Total Approved Project Emissions	**73,230.0**	**80.8**	**2.8**	**76,088.1**
Approved Project Amortized Construction Emissions				**3,809.6**
Total Approved Project Annual Emissions				**79,897.7**
SCAQMD Threshold				3,000
Exceed?				**Yes**
Modified Project				
Modified Project Mobile Sources	68,399.0	2.9	2.9	69,330.0
Modified Project Area Sources	2,350.6	0.1	<0.1	2,353.7
Modified Project Energy Sources	30,192.0	2.1	0.2	30,296.0
Modified Project Water Sources	1,695.3	25.0	0.6	2,501.2
Modified Project Waste Sources	1,097.7	109.7	0.0	3,840.4
Modified Project Emissions	**103,735**	**139.8**	**3.6**	**108,321.3**
Modified Project Amortized Construction Emissions				6,710.1
Total Modified Project Annual Emissions				**115,031.4**
SCAQMD Threshold				3,000
Exceed?				**Yes**

Table P: Greenhouse Gas Emissions (MT/yr)

Emissions Source	Operational Emissions (MT/yr)			
	CO_2	CH_4	N_2O	CO_2e
Increase in Emissions (Modified Project – Approved Project)				**35,133.7**

Source: Compiled by LSA (May 2024).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

As discussed above, according to SCAQMD, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 3,000 MT CO_2e/yr. Based on the analysis results, the Modified Project would result in approximately 115,031.4 MT CO_2e/yr, an increase of approximately 35,133.7 MT CO_2e/yr over the Approved Project, which would exceed the SCAQMD threshold of 3,000 MT CO_2e/yr.

However, before development can occur, once a specific development project is proposed, it would be required to be analyzed for conformance with the General Plan, TLSP, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. As demonstrated above, the likely scale and extent of buildout associated with future projects envisioned under the Modified Project would likely exceed the SCAQMD thresholds.

The previously adopted 2017 SEIR mitigation measures would be required to be implemented with each development project under the proposed TLSP Amendment. As listed previously in the Air Quality discussion, this includes 2017 SEIR MM AQ-3, 2017 SEIR MM AQ-4, and MM AQ-7. While these mitigation measures would reduce GHG emissions generated during operational activities associated with future development envisioned under the proposed TLSP Amendment, emissions would continue to exceed the SCAQMD threshold of 3,000 MT CO_2e/yr, and impacts would continue to be significant and unavoidable.

Consistency with Greenhouse Gas Emissions Reduction Plans

An evaluation of the proposed project's consistency with the 2022 Scoping Plan and the 2024–2050 RTP/SCS is provided below.

2022 Scoping Plan

The following discussion evaluates the proposed project according to the goals of the 2022 Scoping Plan, EO B-30-15, AB 1279, SB 32, and AB 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels.

The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016. AB 1279 establishes State policy to achieve net zero GHG emissions no later than 2045 and for Statewide anthropogenic GHG emissions to be reduced to at least 85 percent below 1990 levels by 2045.

In addition, the 2022 Scoping Plan assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California will be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As identified above, buildout of the proposed project would be required to comply with the latest Title 24 and CALGreen Code standards regarding water efficiency and energy conservation requirements. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, buildout associated with the proposed project would be required to comply with the latest Title 24 and CALGreen Code standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the project would be required to comply with the California Model Water Efficient Landscape Ordinance. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation

emissions would not directly apply to the proposed project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the Modified Project area would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

2024–2050 Regional Transportation Plan/Sustainable Communities Strategy

SCAG's 2024–2050 RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2024–2050 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe to all roadway users, preserve the transportation system, and expand transit and foster development in transit oriented communities. The 2024–2050 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in the 2024–205. RTP/SCS, would reach the GHG emissions reduction target set by CARB, including the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels). The 2024–2050 RTP/SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the 2024–2050 RTP/SCS but provides incentives for consistency for governments and developers.

The objectives of the 2024–2050 RTP/SCS are to create a region with: transit as a backbone of the transportation system; more Complete Streets where people and safety are prioritized; policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals; more housing, jobs, and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces; more housing to address the existing housing need as defined by the RHNA; safe and fluid movement of goods, with a commitment to the broad deployment of zero- and near-zero emission technologies.

With respect to determining the proposed project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2024–2050 RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2024–2050 RTP/SCS, in 2019, the City's population was 80,400 residents and the City had 27,000 households and 51,700 jobs. Households are forecast to increase by approximately 6,800 households by 2035 and 7,000 households by 2050 and employment are forecast to increase by approximately 14,600 jobs by 2035 and 19,600 jobs by 2050.[50]

[50] SCAG. 2024. *Connect SoCal 2024 Demographics & Growth Forecast.* Website: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-tr-demographics-growth-forecast-final-040424.pdf?1712261839 (accessed May 2024).

The proposed project includes a Specific Plan Amendment to amend the TLSP to increase the allowed residential capacity, consistent with the 2021–2029 Housing Element Update. As discussed in the Project Description, the proposed project would not directly result in physical development but upon approval of the Modified Project, the Modified Project area could accommodate 4,970 additional units to help the City meet its RHNA allocation.

The development of 4,970 housing units would result in approximately 14,314 additional residents based on the estimated 2.88 persons per household[51] in Tustin. Future development implemented in accordance with the proposed Specific Plan Amendment would accommodate planned regional housing growth included in the SCAG RHNA and would be required to adhere to the General Plan. Therefore, since the purpose of the proposed project is to accommodate planned regional housing growth included in the SCAG RHNA, the proposed project would not exceed the growth assumptions in the SCAG's 2024–2050 RTP/SCS. Based on the nature of the proposed project, it is anticipated that implementation of the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the 2024–2050 RTP/SCS.

Implementing SCAG's 2024–2050 RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. The proposed project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035. As identified above, the proposed project would help the City meet its RHNA allocation, which is consistent with SCAG's objectives to provide more housing in Priority Development Areas to preserve natural lands and open spaces and to address the existing housing need as defined by the RHNA. As such, the proposed project would be consistent with SCAG's 2024–2050 RTP/SCS.

Although the proposed project would be consistent with the identified measures and goals from the 2022 Scoping Plan and 2024–2050 RTP/SCS, the proposed project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the proposed project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

CUMULATIVE IMPACTS

This section presents information regarding potential cumulative impacts associated with the proposed project. As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area. Below is a list of cumulative projects; however, because of the lack of available emissions data for the cumulative projects, cumulative

[51] State of California, Department of Finance. 2023. *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change*. May.

emissions were not evaluated quantitatively. Table Q lists the cumulative projects and provides a brief description and the distances from the TLSP area.

Cumulative Air Quality Impacts

The cumulative impact area for air quality related to the proposed project is the South Coast Air Basin. Each project in the Basin is required to comply with SCAQMD rules and regulations and is subject to independent review. Future development that may take place with implementation of the project would contribute criteria pollutants to the area during project construction and operation.

The Basin is currently designated as a nonattainment area for the federal O_3 standard and $PM_{2.5}$ standard and as a nonattainment area for the State O_3, PM_{10}, and $PM_{2.5}$ standard. Thus, the Basin has not met the federal and State standards for these air pollutants. As identified above, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Table Q: Cumulative Projects List

Project	Project Address	Project Description	Distance from the TLSP Area
City of Santa Ana Projects			
Warner/Redhill (The Bowery)	2300 Red Hill Avenue, Santa Ana, CA	Demolition of three industrial buildings (approximately 154,096 sq ft) and construction of a mixed-use development with 1,100 multi-family residential units and approximately 80,000 sq ft of commercial space.	140 feet
PacifiCenter New Building	1700 St. Andrew Place, Santa Ana, CA	Demolition of an office building (approximately 171,330 sq ft) and construction of three separate industrial buildings totaling 161,500 sq ft and comprising of a combination of warehouse, manufacturing, and office uses.	3,920 feet
Bristol Office Plaza New Building	1400 St. Gertrude Place, Santa Ana, CA	Construction of a new single-story commercial building totaling 7,000 sq ft, surface parking, and landscape/open space area. The commercial building would be used for professional/medical offices and include a pharmacy.	13,790 feet
Anchor Stone Christian Church	2938 Daimler Street, Santa Ana, CA	Convert existing 3,843 sq ft of office space to a church.	2,515 feet
Park 55 Development	1221 Dyer Road, Santa Ana, CA	Demolish two industrial buildings (approximately 157,000 sq ft) and construct 3 new industrial buildings. Building one would be 69,300 sq ft, building two would be 47,300 sq ft, and building three would be 59,400 sq ft.	4,215 feet
City of Tustin Projects			
Tustin Marketplace	2961 El Camino Real, Tustin, CA 92782	A total of 900 additional dwelling units.	5,580 feet

Table Q: Cumulative Projects List

Project	Project Address	Project Description	Distance from the TLSP Area
Housing Overlay Zone			
The Landing at Tustin Legacy	Portion of Neighborhood D South Tustin, CA	114 three-story detached homes, 117 three-story triplex townhomes, and 176 stacked flats and townhomes.	Within TLSP area
ATEP - Goddard Preschool	1629 Victory Road, Tustin, CA	New construction of 14,689 sq ft preschool (26 staff, 220 kids).	Within TLSP area
ATEP - Saddleback Buildings	1634 Valencia Avenue, Tustin, CA	Two new educational buildings: 20,950 sq ft culinary arts and 36,700 sq ft auto tech.	Within TLSP area
ATEP - Advantech NA Campus	Red Hill Avenue and Victory Road, Tustin, CA	New 6-story, 108,942 sq ft headquarters office building and 2-story, 78,837 sq ft warehouse facility on an approximately 10-acre property.	Within TLSP area
ATEP - Legacy Medical Plaza	Red Hill Avenue and Victory Road, Tustin, CA	Two-story medical office building of approximately 50,000 sq ft.	Within TLSP area
The Hill Mixed Use Project	13751 and 13841 Red Hill Avenue, Tustin, CA	New mixed-use project, including 137 residential rental units and 7,000 sq ft of retail space.	8,340 feet
Farmers and Merchants Bank	13612 Newport Avenue, Tustin, CA	Demolition of an existing 5,485 sq ft restaurant to construct a new 6,315 sq ft bank.	10,700 feet
City Ventures	14042 Newport Avenue, Tustin, CA	New construction of 42 residential units (including 7 live/work) on a vacant parcel.	8,795 feet
Warner Corporate Plaza	1371 Warner Avenue, Tustin, CA	Extensive renovation of existing 11-building business park, and includes approximately 19,000 sq ft of additions to office buildings and various site improvements.	545 feet
Centurion Plaza Redevelopment	15661 Red Hill Avenue, Tustin, CA	Redevelopment of site with two new industrial warehouse buildings (142,690 sq ft total).	140 feet
New industrial buildings	1100 Valencia and 1101 Bell, Tustin, CA	Redevelopment of site with two new industrial buildings (133,940 sq ft and 177,830 sq ft).	2,235 feet
Panatoni 2 Industrial Building	14321 and 14351 Myford, Tustin, CA	Redevelopment of site with new 148,437 sq ft industrial building.	2,500 feet
Conceptual Industrial Redevelopment	14511 Myford, Tustin, CA	Addition to existing industrial warehouse (43,579 sq ft existing, 103,480 sq ft proposed).	2,015 feet
City of Irvine Projects			
184-unit apartment building	2602 McGaw Avenue, Irvine, CA	Project is 75-foot tall, 7-story residential building comprised of 5 levels of residential units on top of 2 levels of above-ground parking structure, including 24,430 sq ft single-story office/warehouse building (7,932 sq ft of office and 16,498 sq ft of industrial) would be demolished to allow for the residential development.	4,090 feet
New childcare facility associated with Westcliff University	2941 Alton Parkway, Irvine, CA	The project would include a new childcare facility associated with Westcliff University, including a 3,441 sq ft athletics office, 4,634 sq ft athletics therapy, and 14,292 sq ft preschool, totaling 22,367 sq ft.	2,695 feet

Table Q: Cumulative Projects List

Project	Project Address	Project Description	Distance from the TLSP Area

Source: EPD Solutions, Inc. (February 2024).

Air pollution is inherently a cumulative type of impact measured across an air basin. The Air Quality Impacts section above includes an analysis of the project's contribution to cumulative air impacts. As demonstrated above, construction emissions associated with buildout envisioned under the Modified Project would not exceed the SCAQMD thresholds for VOCs, NO_X, CO, SO_X, $PM_{2.5,}$ or PM_{10} emissions. However, as discussed above, operational emissions associated with the future development of the Modified Project would exceed the SCAQMD LSTs for PM_{10} during operational activities. Implementation of 2017 SEIR MM AQ-3, 2017 SEIR MM AQ-4, and MM AQ-7 would reduce criteria air pollutant emissions generated during operational activities associated with future development envisioned under the proposed TLSP Amendment. However, there is currently not enough information to quantify emissions of specific development that may take place under the TLSP. Without quantification to guarantee a less than significant finding, future development projects may still exceed the SCAQMD regional significance thresholds. Therefore, air quality emissions associated with future development that may occur under the proposed project would result in cumulatively considerable impact.

Cumulative Energy Impacts

The geographic area for cumulative analysis of electricity is that of the SCE service area, while the geographic area for cumulative analysis of natural gas service is that of the SoCalGas service area. Buildout associated with the residential and nonresidential development capacity associated with the TLSP would result in an increased services demand in electricity and natural gas. Although the proposed project would result in an increase in demand for electricity, this increase would not require SCE to expand or construct infrastructure that could cause substantial environmental impacts. As discussed previously, total electricity consumption in the SCE service area in 2022 was 85,870 GWh. By 2030, consumption is anticipated to increase by 12,000 GWh for the low-demand scenario and by 22,000 GWh for the high-demand scenario.[52] While this forecast represents a large increase in electricity consumption, the proposed project's share of cumulative consumption would be negligible. The proposed project, in combination with cumulative development, is well within SCE's system-wide net annual increase in electricity supplies over the 2018 to 2030 period, and there are sufficient planned electricity supplies in the region for estimated net increases in energy demands.

Similarly, additional natural gas infrastructure is not anticipated due to cumulative development. Total natural gas consumption in the SoCalGas service area in 2022 was 5,026 million therms. Between 2018 and 2030, total natural gas consumption in the SoCalGas service area is forecast to

[52] CEC. 2018. *California Energy Demand, 2018–2030 Revised Forecast*. Publication Number: CEC-200-2018-002-CMF. February. Website: https://efiling.energy.ca.gov/getdocument.aspx?tn=223244 (accessed April 2024).

remain steady for the low- and mid-demand scenarios and to increase by approximately 650 million therms in the high-demand scenario due to intense energy efficiency efforts.[53] The proposed project's share of cumulative consumption of natural gas in the SoCalGas service area would be negligible. It is anticipated that SoCalGas would be able to meet the natural gas demand of cumulative development without additional facilities. In addition, both SCE and SoCalGas demand forecasts include the growth contemplated by the proposed project and the other cumulative development within their respective service areas. Increased energy efficiency to comply with building energy efficiency standards would reduce energy consumption on a per-square-foot basis. Furthermore, utility companies are required to increase their renewable energy sources to meet the Renewable Portfolio Standards mandate of 60 percent renewable supplies by 2030. SCE and SoCalGas plan to continue to provide reliable service to their customers and upgrade their distribution systems as necessary to meet future demand.

Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use compared to the amount of existing development and to the total number of vehicle trips and VMT throughout Orange County and the region. The proposed project and cumulative development are required to comply with various federal and State government legislation to improve energy efficiency in buildings, equipment, and appliances, and reduce VMT.

As such, the proposed project would not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, the proposed project's contribution to impacts related to the inefficient, wasteful, and unnecessary consumption of energy would not be cumulatively considerable.

Cumulative Greenhouse Gas Impacts

GHG impacts are by their nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in GHG emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. This serves to define the State's share of the reductions regardless of the activities or lack of activities of other areas of the U.S. or the world. Therefore, a cumulative threshold based on consistency with State targets and actions to reduce GHGs is an appropriate standard of comparison for significance determinations.

As previously stated, GHG emissions associated with the buildout under the Modified Project would exceed the SCAQMD threshold of 3,000 MT CO_2e/yr. Since GHGs are a global issue, it is unlikely that the project would generate enough GHG emissions to influence GHG emissions on its own; however, because project-related CO_2e emissions would exceed the SCAQMD's threshold, the proposed project would have a significant contribution to cumulatively considerable GHG emissions impacts.

53 Ibid.

CONCLUSION

Based on the analysis presented above, construction associated with buildout envisioned under the Modified Project would not result in the generation of criteria air pollutants that would exceed SCAQMD thresholds of significance. Compliance with SCAQMD Rule 403 would further reduce construction dust impacts. As demonstrated above, even with implementation of SEIR MM AQ-3, SEIR MM AQ-4, and MM AQ-7, operation-related air quality impacts associated with the Modified Project would exceed SCAQMD thresholds of significance, resulting in significant and unavoidable impacts. The proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors and would also not result in other emissions (such as those leading to odors) affecting a substantial number of people. In addition, the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Operation of the proposed project would generate GHG emissions that would have a significant effect on the environment and would therefore not be consistent with the 2024–2050 RTP/SCS or the goals of the 2022 Scoping Plan.

APPENDIX A

CALEEMOD OUTPUT SHEETS

Tustin Legacy Specific Plan - Modified Project Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Tustin Legacy Specific Plan - Modified Project
Construction Start Date	1/6/2025
Operational Year	2045
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	19.6
Location	33.71064826138891, -117.82125522627334
County	Orange
City	Tustin
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	6824
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.23

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	809	Dwelling Unit	263	1,577,550	9,475,701	—	2,411	—
Apartments Mid Rise	8,647	Dwelling Unit	228	8,301,120	0.00	—	25,768	—
Hotel	241	Room	8.03	72,000	0.00	—	—	—
Regional Shopping Center	1,085	1000sqft	24.9	1,085,190	0.00	—	—	—
General Office Building	1,621	1000sqft	37.2	1,620,700	0.00	—	—	—
Retirement Community	791	Dwelling Unit	158	471,000	0.00	—	2,357	—
High School	1,784	Student	5.43	236,667	0.00	0.00	—	—
City Park	136	Acre	136	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	64.3	67.8	335	0.30	0.39	101	101	0.38	24.0	24.4	—	114,098	114,098	3.23	8.04	116,897
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	64.6	70.0	298	0.30	0.39	101	101	0.38	24.0	24.4	—	110,568	110,568	3.37	8.04	113,055

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	45.7	48.7	209	0.21	0.28	71.2	71.5	0.27	17.0	17.3	—	78,338	78,338	2.41	5.76	80,203
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.34	8.89	38.2	0.04	0.05	13.0	13.1	0.05	3.10	3.15	—	12,970	12,970	0.40	0.95	13,279

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.87	19.5	36.2	0.06	0.18	7.83	7.93	0.18	3.98	4.08	—	6,789	6,789	0.27	0.06	6,815
2026	0.86	19.5	36.1	0.06	0.18	3.78	3.96	0.18	1.47	1.65	—	6,785	6,785	0.27	0.06	6,811
2027	23.4	67.8	335	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	114,098	114,098	3.23	8.04	116,897
2028	22.6	63.7	317	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	111,909	111,909	3.15	5.69	113,972
2029	21.9	61.8	300	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	109,712	109,712	3.15	5.69	111,743
2030	21.0	58.0	285	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	107,515	107,515	2.71	5.42	109,424
2031	20.0	56.5	270	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	105,314	105,314	2.67	5.42	107,195
2032	19.2	52.7	258	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	103,142	103,142	2.67	5.14	104,916
2033	18.5	51.4	246	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	101,104	101,104	2.40	5.14	102,848
2034	17.8	50.2	237	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	99,219	99,219	2.19	4.87	100,856
2035	17.9	48.8	228	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	97,459	97,459	2.19	4.87	99,077
2036	17.3	47.8	219	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	95,739	95,739	2.19	4.60	97,260
2037	64.3	47.2	250	0.30	0.39	101	101	0.38	24.0	24.4	—	107,410	107,410	2.33	4.71	108,965
2038	63.4	46.2	243	0.30	0.39	101	101	0.38	24.0	24.4	—	105,725	105,725	2.03	4.44	107,177
2039	59.7	45.6	238	0.30	0.39	101	101	0.38	24.0	24.4	—	104,507	104,507	2.03	4.44	105,946

2040	59.5	45.0	231	0.30	0.39	101	101	0.38	24.0	24.4	—	103,421	103,421	1.81	4.44	104,844
2041	58.4	44.3	228	0.30	0.39	101	101	0.38	24.0	24.4	—	102,463	102,463	1.78	4.22	103,813
2042	58.2	43.9	224	0.30	0.39	101	101	0.38	24.0	24.4	—	101,613	101,613	1.78	3.95	102,875
2043	57.8	43.6	220	0.30	0.39	100	101	0.38	24.0	24.4	—	100,868	100,868	1.78	3.95	102,124
2044	46.5	9.76	43.6	0.02	0.12	15.2	15.3	0.11	3.56	3.67	—	14,256	14,256	0.17	0.09	14,289
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.87	19.5	36.1	0.06	0.18	7.83	7.93	0.18	3.98	4.08	—	6,780	6,780	0.27	0.06	6,805
2026	0.86	19.5	36.0	0.06	0.18	3.78	3.96	0.18	1.47	1.65	—	6,776	6,776	0.27	0.06	6,801
2027	23.2	70.0	298	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	110,568	110,568	3.37	8.04	113,055
2028	22.5	68.1	282	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	108,447	108,447	3.37	8.04	110,934
2029	21.5	64.0	267	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	106,313	106,313	3.15	8.04	108,794
2030	20.8	62.2	254	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	104,174	104,174	2.88	5.42	105,866
2031	19.7	58.4	241	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	102,030	102,030	2.85	5.42	103,720
2032	19.2	56.9	231	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	99,907	99,907	2.67	5.14	101,511
2033	18.5	55.5	221	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	97,913	97,913	2.40	5.14	99,510
2034	18.0	51.9	211	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	96,066	96,066	2.36	4.87	97,580
2035	17.4	50.7	204	0.29	0.36	85.7	86.0	0.35	20.5	20.9	—	94,341	94,341	2.36	4.87	95,855
2036	64.6	52.9	231	0.30	0.39	101	101	0.38	24.0	24.4	—	105,247	105,247	2.33	4.71	106,712
2037	64.2	51.7	224	0.30	0.39	101	101	0.38	24.0	24.4	—	103,732	103,732	2.30	4.71	105,196
2038	60.5	50.8	216	0.30	0.39	101	101	0.38	24.0	24.4	—	102,090	102,090	2.03	4.44	103,465
2039	59.7	47.1	211	0.30	0.39	101	101	0.38	24.0	24.4	—	100,894	100,894	2.03	4.44	102,269
2040	59.2	46.7	207	0.30	0.39	101	101	0.38	24.0	24.4	—	99,828	99,828	2.03	4.44	101,202
2041	58.6	46.1	203	0.30	0.39	101	101	0.38	24.0	24.4	—	98,889	98,889	1.99	4.44	100,263
2042	58.2	45.5	199	0.30	0.39	101	101	0.38	24.0	24.4	—	98,057	98,057	1.99	4.17	99,349
2043	57.7	45.1	195	0.30	0.39	100	101	0.38	24.0	24.4	—	97,323	97,323	1.78	4.17	98,610
2044	46.5	9.83	39.3	0.02	0.12	15.2	15.3	0.11	3.56	3.67	—	13,655	13,655	0.17	0.12	13,696

2045	46.1	2.58	28.4	< 0.005	0.03	15.1	15.1	0.03	3.53	3.56	—	12,001	12,001	0.11	0.11	12,036
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.54	11.7	22.3	0.04	0.09	4.44	4.53	0.09	2.13	2.23	—	4,197	4,197	0.17	0.04	4,212
2026	0.62	13.9	25.8	0.04	0.13	2.70	2.83	0.13	1.05	1.18	—	4,842	4,842	0.19	0.04	4,860
2027	12.8	42.6	174	0.17	0.23	46.6	46.9	0.22	11.3	11.5	—	61,792	61,792	1.88	4.38	63,221
2028	16.2	48.7	209	0.21	0.26	60.6	60.8	0.25	14.5	14.8	—	78,338	78,338	2.41	5.76	80,203
2029	15.3	45.6	198	0.21	0.26	60.4	60.7	0.25	14.5	14.7	—	76,587	76,587	2.25	5.74	78,434
2030	14.9	44.5	188	0.21	0.26	60.4	60.7	0.25	14.5	14.7	—	75,048	75,048	2.06	3.87	76,323
2031	14.1	41.8	178	0.21	0.26	60.4	60.7	0.25	14.5	14.7	—	73,504	73,504	2.03	3.87	74,770
2032	13.7	40.7	171	0.21	0.26	60.6	60.8	0.25	14.5	14.8	—	72,177	72,177	1.91	3.68	73,376
2033	13.2	39.5	163	0.21	0.26	60.4	60.7	0.25	14.5	14.7	—	70,547	70,547	1.71	3.67	71,731
2034	12.7	36.8	156	0.21	0.26	60.4	60.7	0.25	14.5	14.7	—	69,220	69,220	1.69	3.48	70,340
2035	12.5	36.1	150	0.21	0.26	60.4	60.7	0.25	14.5	14.7	—	67,979	67,979	1.69	3.48	69,093
2036	13.3	35.4	146	0.21	0.26	60.9	61.1	0.25	14.6	14.8	—	67,202	67,202	1.57	3.30	68,253
2037	45.7	36.8	165	0.21	0.28	71.0	71.3	0.27	16.9	17.2	—	74,795	74,795	1.64	3.36	75,867
2038	43.2	36.0	161	0.21	0.28	71.0	71.3	0.27	16.9	17.2	—	73,613	73,613	1.45	3.17	74,618
2039	42.8	33.5	156	0.21	0.28	71.0	71.3	0.27	16.9	17.2	—	72,755	72,755	1.45	3.17	73,756
2040	42.3	33.3	153	0.21	0.28	71.2	71.5	0.27	17.0	17.3	—	72,188	72,188	1.45	3.18	73,189
2041	41.9	32.6	150	0.21	0.28	71.0	71.3	0.27	16.9	17.2	—	71,317	71,317	1.42	3.17	72,311
2042	41.6	32.3	147	0.21	0.28	71.0	71.3	0.27	16.9	17.2	—	70,718	70,718	1.42	2.98	71,652
2043	35.9	15.3	67.3	0.08	0.15	30.7	30.8	0.14	7.30	7.44	—	29,879	29,879	0.50	1.04	30,207
2044	33.2	4.33	25.0	0.01	0.05	10.7	10.8	0.05	2.51	2.55	—	9,293	9,293	0.10	0.08	9,321
2045	0.54	0.03	0.35	< 0.005	< 0.005	0.17	0.18	< 0.005	0.04	0.04	—	143	143	< 0.005	< 0.005	143
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.10	2.13	4.07	0.01	0.02	0.81	0.83	0.02	0.39	0.41	—	695	695	0.03	0.01	697
2026	0.11	2.54	4.70	0.01	0.02	0.49	0.52	0.02	0.19	0.21	—	802	802	0.03	0.01	805
2027	2.33	7.77	31.7	0.03	0.04	8.51	8.55	0.04	2.05	2.10	—	10,230	10,230	0.31	0.73	10,467

2028	2.96	8.89	38.2	0.04	0.05	11.1	11.1	0.05	2.65	2.69	—	12,970	12,970	0.40	0.95	13,279
2029	2.79	8.33	36.1	0.04	0.05	11.0	11.1	0.05	2.64	2.69	—	12,680	12,680	0.37	0.95	12,986
2030	2.72	8.13	34.4	0.04	0.05	11.0	11.1	0.05	2.64	2.69	—	12,425	12,425	0.34	0.64	12,636
2031	2.58	7.63	32.4	0.04	0.05	11.0	11.1	0.05	2.64	2.69	—	12,169	12,169	0.34	0.64	12,379
2032	2.49	7.42	31.2	0.04	0.05	11.1	11.1	0.05	2.65	2.69	—	11,950	11,950	0.32	0.61	12,148
2033	2.42	7.21	29.8	0.04	0.05	11.0	11.1	0.05	2.64	2.69	—	11,680	11,680	0.28	0.61	11,876
2034	2.32	6.72	28.5	0.04	0.05	11.0	11.1	0.05	2.64	2.69	—	11,460	11,460	0.28	0.58	11,646
2035	2.28	6.59	27.3	0.04	0.05	11.0	11.1	0.05	2.64	2.69	—	11,255	11,255	0.28	0.58	11,439
2036	2.43	6.47	26.7	0.04	0.05	11.1	11.2	0.05	2.66	2.71	—	11,126	11,126	0.26	0.55	11,300
2037	8.34	6.72	30.1	0.04	0.05	13.0	13.0	0.05	3.09	3.14	—	12,383	12,383	0.27	0.56	12,561
2038	7.89	6.57	29.4	0.04	0.05	13.0	13.0	0.05	3.09	3.14	—	12,187	12,187	0.24	0.52	12,354
2039	7.81	6.11	28.5	0.04	0.05	13.0	13.0	0.05	3.09	3.14	—	12,045	12,045	0.24	0.52	12,211
2040	7.72	6.08	28.0	0.04	0.05	13.0	13.1	0.05	3.10	3.15	—	11,952	11,952	0.24	0.53	12,117
2041	7.64	5.96	27.4	0.04	0.05	13.0	13.0	0.05	3.09	3.14	—	11,807	11,807	0.24	0.52	11,972
2042	7.59	5.90	26.9	0.04	0.05	13.0	13.0	0.05	3.09	3.14	—	11,708	11,708	0.24	0.49	11,863
2043	6.55	2.79	12.3	0.01	0.03	5.59	5.62	0.03	1.33	1.36	—	4,947	4,947	0.08	0.17	5,001
2044	6.06	0.79	4.56	< 0.005	0.01	1.95	1.96	0.01	0.46	0.47	—	1,539	1,539	0.02	0.01	1,543
2045	0.10	0.01	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	23.6	23.6	< 0.005	< 0.005	23.7

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	612	311	2,356	5.52	17.7	496	514	17.4	126	143	8,100	812,420	820,520	847	21.7	848,486
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	541	315	1,553	5.32	17.2	496	513	17.1	126	143	8,100	793,479	801,579	848	22.5	829,689
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	579	183	1,996	4.45	6.61	481	488	6.43	122	128	8,100	618,465	626,564	844	22.0	654,467
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	106	33.4	364	0.81	1.21	87.8	89.0	1.17	22.3	23.4	1,341	102,394	103,735	140	3.64	108,355

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	217	110	1,552	4.25	1.52	496	498	1.42	126	127	—	432,845	432,845	16.9	16.7	438,343
Area	392	151	777	0.96	12.2	—	12.2	12.1	—	12.1	0.00	188,442	188,442	3.72	0.39	188,650
Energy	2.87	50.0	27.4	0.31	3.97	—	3.97	3.97	—	3.97	—	182,363	182,363	13.0	1.02	182,991
Water	—	—	—	—	—	—	—	—	—	—	1,470	8,770	10,240	151	3.65	15,107
Waste	—	—	—	—	—	—	—	—	—	—	6,630	0.00	6,630	663	0.00	23,196
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	199
Total	612	311	2,356	5.52	17.7	496	514	17.4	126	143	8,100	812,420	820,520	847	21.7	848,486
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	218	120	1,465	4.08	1.53	496	498	1.42	126	127	—	415,998	415,998	17.6	17.5	421,646
Area	320	144	61.5	0.92	11.7	—	11.7	11.7	—	11.7	0.00	186,349	186,349	3.64	0.37	186,549
Energy	2.87	50.0	27.4	0.31	3.97	—	3.97	3.97	—	3.97	—	182,363	182,363	13.0	1.02	182,991
Water	—	—	—	—	—	—	—	—	—	—	1,470	8,770	10,240	151	3.65	15,107
Waste	—	—	—	—	—	—	—	—	—	—	6,630	0.00	6,630	663	0.00	23,196

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	199
Total	541	315	1,553	5.32	17.2	496	513	17.1	126	143	8,100	793,479	801,579	848	22.5	829,689
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	215	119	1,474	4.05	1.50	481	482	1.40	122	123	—	413,134	413,134	17.3	17.3	418,757
Area	361	14.3	494	0.09	1.14	—	1.14	1.06	—	1.06	0.00	14,197	14,197	0.31	0.04	14,216
Energy	2.87	50.0	27.4	0.31	3.97	—	3.97	3.97	—	3.97	—	182,363	182,363	13.0	1.02	182,991
Water	—	—	—	—	—	—	—	—	—	—	1,470	8,770	10,240	151	3.65	15,107
Waste	—	—	—	—	—	—	—	—	—	—	6,630	0.00	6,630	663	0.00	23,196
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	199
Total	579	183	1,996	4.45	6.61	481	488	6.43	122	128	8,100	618,465	626,564	844	22.0	654,467
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	39.2	21.7	269	0.74	0.27	87.8	88.0	0.26	22.3	22.5	—	68,399	68,399	2.87	2.86	69,330
Area	65.9	2.61	90.2	0.02	0.21	—	0.21	0.19	—	0.19	0.00	2,351	2,351	0.05	0.01	2,354
Energy	0.52	9.13	4.99	0.06	0.72	—	0.72	0.72	—	0.72	—	30,192	30,192	2.15	0.17	30,296
Water	—	—	—	—	—	—	—	—	—	—	243	1,452	1,695	25.0	0.60	2,501
Waste	—	—	—	—	—	—	—	—	—	—	1,098	0.00	1,098	110	0.00	3,840
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0
Total	106	33.4	364	0.81	1.21	87.8	89.0	1.17	22.3	23.4	1,341	102,394	103,735	140	3.64	108,355

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	14.7	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,295	5,295	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	14.7	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,295	5,295	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	6.46	12.4	0.02	0.04	—	0.04	0.04	—	0.04	—	2,321	2,321	0.09	0.02	2,329
Dust From Material Movement	—	—	—	—	—	3.36	3.36	—	1.73	1.73	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.18	2.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	384	384	0.02	< 0.005	386
Dust From Material Movement	—	—	—	—	—	0.61	0.61	—	0.32	0.32	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.73	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	166	166	< 0.005	0.01	169
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.65	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	158	158	< 0.005	0.01	160
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	70.4	70.4	< 0.005	< 0.005	71.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	11.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,599	6,599	0.27	0.05	6,622
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,599	6,599	0.27	0.05	6,622
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	5.17	9.41	0.02	0.05	—	0.05	0.05	—	0.05	—	1,756	1,756	0.07	0.01	1,762
Dust From Material Movement	—	—	—	—	—	0.96	0.96	—	0.38	0.38	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	1.72	< 0.005	0.01	—	0.01	0.01	—	0.01	—	291	291	0.01	< 0.005	292
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.07	0.07	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.84	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	190	190	< 0.005	0.01	193
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.74	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	181	181	< 0.005	0.01	183
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	48.9	48.9	< 0.005	< 0.005	49.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.09	8.09	< 0.005	< 0.005	8.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,599	6,599	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,599	6,599	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	13.9	25.2	0.04	0.13	—	0.13	0.13	—	0.13	—	4,713	4,713	0.19	0.04	4,729
Dust From Material Movement	—	—	—	—	—	2.56	2.56	—	1.02	1.02	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	2.53	4.61	0.01	0.02	—	0.02	0.02	—	0.02	—	780	780	0.03	0.01	783
Dust From Material Movement	—	—	—	—	—	0.47	0.47	—	0.19	0.19	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.79	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	187	187	< 0.005	0.01	189
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.69	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	178	178	< 0.005	0.01	180
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	< 0.005	0.01	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.3	21.3	< 0.005	< 0.005	21.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,598	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	3.23	5.88	0.01	0.03	—	0.03	0.03	—	0.03	—	1,098	1,098	0.04	0.01	1,101
Dust From Material Movement	—	—	—	—	—	0.60	0.60	—	0.24	0.24	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.59	1.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	182	182	0.01	< 0.005	182
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.65	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	175	175	< 0.005	0.01	177
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.5	29.5	< 0.005	< 0.005	29.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.88	4.88	< 0.005	< 0.005	4.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	4.75	7.78	0.01	0.05	—	0.05	0.05	—	0.05	—	1,304	1,304	0.05	0.01	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.87	1.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	216	216	0.01	< 0.005	217
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	22.1	18.6	299	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	74,153	74,153	1.07	2.88	75,274
Vendor	0.94	40.5	21.1	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	37,548	37,548	2.06	5.13	39,218
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	22.0	19.1	262	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	70,597	70,597	1.25	2.88	71,494
Vendor	0.90	42.2	21.6	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	37,573	37,573	2.02	5.13	39,156
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.9	11.6	148	0.00	0.00	40.5	40.5	0.00	9.48	9.48	—	38,928	38,928	0.68	1.57	39,468
Vendor	0.51	23.0	11.6	0.15	0.15	5.56	5.71	0.15	1.54	1.69	—	20,433	20,433	1.10	2.79	21,314

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.18	2.11	27.0	0.00	0.00	7.38	7.38	0.00	1.73	1.73	—	6,445	6,445	0.11	0.26	6,534
Vendor	0.09	4.20	2.11	0.03	0.03	1.02	1.04	0.03	0.28	0.31	—	3,383	3,383	0.18	0.46	3,529
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.26	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,717	1,717	0.07	0.01	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	1.14	1.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	284	284	0.01	< 0.005	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	21.4	16.0	282	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	72,830	72,830	1.07	0.53	73,225
Vendor	0.90	38.9	20.4	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	36,682	36,682	1.99	5.13	38,341
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	21.2	18.7	247	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	69,341	69,341	1.25	2.88	70,237
Vendor	0.90	40.6	21.0	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	36,708	36,708	2.02	5.13	38,291
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	15.3	13.4	184	0.00	0.00	53.3	53.3	0.00	12.5	12.5	—	50,339	50,339	0.89	2.07	51,042
Vendor	0.67	29.0	14.8	0.19	0.19	7.32	7.52	0.19	2.03	2.22	—	26,281	26,281	1.45	3.68	27,438
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.80	2.45	33.6	0.00	0.00	9.72	9.72	0.00	2.28	2.28	—	8,334	8,334	0.15	0.34	8,451
Vendor	0.12	5.30	2.70	0.04	0.04	1.34	1.37	0.04	0.37	0.41	—	4,351	4,351	0.24	0.61	4,543
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	20.7	15.8	266	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	71,600	71,600	1.07	0.53	71,972
Vendor	0.90	37.3	19.8	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	35,715	35,715	1.99	5.13	37,366
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	20.3	16.2	232	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	68,173	68,173	1.07	2.88	69,064
Vendor	0.87	39.0	20.3	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	35,743	35,743	1.99	5.13	37,324
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	14.4	11.6	173	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	49,356	49,356	0.76	2.06	50,046
Vendor	0.64	27.8	14.3	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	25,519	25,519	1.42	3.67	26,670
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.63	2.11	31.6	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	8,171	8,171	0.13	0.34	8,286
Vendor	0.12	5.08	2.61	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	4,225	4,225	0.24	0.61	4,415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	19.8	13.3	251	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	70,453	70,453	0.89	0.53	70,799
Vendor	0.90	36.0	19.2	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	34,665	34,665	1.72	4.86	36,220
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	19.6	16.0	220	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	67,084	67,084	1.07	0.53	67,274
Vendor	0.87	37.4	19.6	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	34,694	34,694	1.72	4.86	36,187
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	14.0	11.4	164	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	48,567	48,567	0.76	0.38	48,750
Vendor	0.64	26.9	13.8	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	24,770	24,770	1.23	3.47	25,855

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.56	2.09	30.0	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	8,041	8,041	0.13	0.06	8,071
Vendor	0.12	4.90	2.53	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	4,101	4,101	0.20	0.57	4,281
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	18.7	13.1	237	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	69,404	69,404	0.89	0.53	69,730
Vendor	0.90	34.7	18.5	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	33,513	33,513	1.68	4.86	35,059
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	18.6	13.5	208	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	66,091	66,091	1.07	0.53	66,280
Vendor	0.87	36.1	19.0	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	33,542	33,542	1.68	4.86	35,035
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	13.3	9.64	154	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	47,845	47,845	0.76	0.38	48,023
Vendor	0.64	25.9	13.4	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	23,947	23,947	1.20	3.47	25,029
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.42	1.76	28.1	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	7,921	7,921	0.13	0.06	7,951
Vendor	0.12	4.73	2.45	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	3,965	3,965	0.20	0.57	4,144
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.19. Building Construction (2032) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.26	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,717	1,717	0.07	0.01	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	284	284	0.01	< 0.005	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	18.0	10.6	226	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	68,400	68,400	0.89	0.53	68,708
Vendor	0.90	33.4	17.9	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	32,346	32,346	1.68	4.59	33,803
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	18.0	13.3	198	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	65,135	65,135	0.89	0.53	65,319
Vendor	0.87	34.8	18.4	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	32,376	32,376	1.68	4.59	33,787
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.8	9.54	148	0.00	0.00	53.3	53.3	0.00	12.5	12.5	—	47,283	47,283	0.64	0.38	47,452
Vendor	0.65	24.9	13.0	0.19	0.19	7.32	7.52	0.19	2.03	2.22	—	23,177	23,177	1.20	3.29	24,201
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.33	1.74	26.9	0.00	0.00	9.72	9.72	0.00	2.28	2.28	—	7,828	7,828	0.11	0.06	7,856
Vendor	0.12	4.54	2.37	0.04	0.04	1.34	1.37	0.04	0.37	0.41	—	3,837	3,837	0.20	0.54	4,007
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.21. Building Construction (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	17.3	10.6	214	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	67,545	67,545	0.89	0.53	67,837
Vendor	0.90	32.1	17.3	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	31,163	31,163	1.41	4.59	32,606
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	17.3	13.1	188	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	64,324	64,324	0.89	0.53	64,508
Vendor	0.87	33.6	17.8	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	31,193	31,193	1.41	4.59	32,597
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.4	9.39	140	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	46,567	46,567	0.64	0.38	46,730
Vendor	0.64	23.9	12.5	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	22,268	22,268	1.01	3.28	23,283

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.26	1.71	25.6	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	7,710	7,710	0.11	0.06	7,737
Vendor	0.12	4.36	2.28	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	3,687	3,687	0.17	0.54	3,855
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.23. Building Construction (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.6	10.4	206	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	66,778	66,778	0.71	0.53	67,051
Vendor	0.90	31.0	17.0	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	30,044	30,044	1.38	4.32	31,400
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.8	10.8	179	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	63,594	63,594	0.89	0.53	63,778
Vendor	0.87	32.3	17.5	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	30,075	30,075	1.38	4.32	31,397
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.9	7.58	134	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	46,039	46,039	0.64	0.38	46,198
Vendor	0.64	23.0	12.3	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	21,469	21,469	0.98	3.08	22,424
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.16	1.38	24.4	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	7,622	7,622	0.11	0.06	7,649
Vendor	0.12	4.19	2.24	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	3,554	3,554	0.16	0.51	3,713
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.25. Building Construction (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.6	10.3	197	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	66,098	66,098	0.71	0.53	66,358
Vendor	0.94	29.8	16.4	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	28,964	28,964	1.38	4.32	30,314
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.2	10.6	173	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	62,948	62,948	0.89	0.53	63,132
Vendor	0.87	31.3	16.8	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	28,996	28,996	1.38	4.32	30,318
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.6	7.58	128	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	45,569	45,569	0.64	0.38	45,724
Vendor	0.64	22.3	11.9	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	20,698	20,698	0.98	3.08	21,651
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.12	1.38	23.3	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	7,545	7,545	0.11	0.06	7,570
Vendor	0.12	4.07	2.16	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	3,427	3,427	0.16	0.51	3,585
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.27. Building Construction (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.26	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,717	1,717	0.07	0.01	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	284	284	0.01	< 0.005	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.1	10.3	188	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	65,419	65,419	0.71	0.53	65,667
Vendor	0.90	28.8	16.1	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	27,923	27,923	1.38	4.05	29,187
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.1	10.6	166	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	62,302	62,302	0.71	0.53	62,481
Vendor	0.87	30.3	16.5	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	27,955	27,955	1.38	4.05	29,196
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.5	7.47	123	0.00	0.00	53.3	53.3	0.00	12.5	12.5	—	45,226	45,226	0.51	0.38	45,375
Vendor	0.65	21.6	11.7	0.19	0.19	7.32	7.52	0.19	2.03	2.22	—	20,009	20,009	0.99	2.90	20,905

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.10	1.36	22.5	0.00	0.00	9.72	9.72	0.00	2.28	2.28	—	7,488	7,488	0.08	0.06	7,512
Vendor	0.12	3.95	2.13	0.04	0.04	1.34	1.37	0.04	0.37	0.41	—	3,313	3,313	0.16	0.48	3,461
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.29. Building Construction (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	15.7	7.73	183	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	64,890	64,890	0.71	0.53	65,127
Vendor	0.90	28.1	15.8	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	27,012	27,012	1.38	4.05	28,273
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	15.7	10.4	160	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	61,798	61,798	0.71	0.53	61,977
Vendor	0.83	29.4	16.2	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	27,045	27,045	1.34	4.05	28,285
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.1	7.45	119	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	44,736	44,736	0.51	0.38	44,881
Vendor	0.62	20.9	11.4	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	19,304	19,304	0.96	2.89	20,196
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.03	1.36	21.7	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	7,407	7,407	0.08	0.06	7,431
Vendor	0.11	3.81	2.09	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	3,196	3,196	0.16	0.48	3,344
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.31. Building Construction (2038) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	15.0	7.73	177	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	64,235	64,235	0.71	0.53	64,464
Vendor	0.90	27.2	15.2	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	26,113	26,113	1.07	3.78	27,281
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.7	10.4	154	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	61,178	61,178	0.71	0.53	61,356
Vendor	0.83	28.4	15.6	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	26,146	26,146	1.07	3.78	27,298
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.04	7.33	116	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	44,286	44,286	0.51	0.38	44,429
Vendor	0.62	20.2	11.0	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	18,662	18,662	0.76	2.70	19,490
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.65	1.34	21.2	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	7,332	7,332	0.08	0.06	7,356
Vendor	0.11	3.69	2.01	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	3,090	3,090	0.13	0.45	3,227
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.33. Building Construction (2039) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.9	7.73	174	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	63,833	63,833	0.71	0.53	64,054
Vendor	0.90	26.5	14.9	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	25,377	25,377	1.07	3.78	26,543
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.9	7.91	151	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	60,794	60,794	0.71	0.53	60,972
Vendor	0.83	27.8	15.3	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	25,411	25,411	1.07	3.78	26,563
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.65	5.65	112	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	44,009	44,009	0.51	0.38	44,149
Vendor	0.62	19.7	10.8	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	18,137	18,137	0.76	2.70	18,964

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.58	1.03	20.4	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	7,286	7,286	0.08	0.06	7,309
Vendor	0.11	3.60	1.97	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	3,003	3,003	0.13	0.45	3,140
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.35. Building Construction (2040) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.26	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,717	1,717	0.07	0.01	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	1.14	1.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	284	284	0.01	< 0.005	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.8	7.55	168	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	63,481	63,481	0.53	0.53	63,691
Vendor	0.90	26.1	14.6	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	24,713	24,713	1.07	3.78	25,876
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.6	7.91	147	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	60,458	60,458	0.71	0.53	60,637
Vendor	0.83	27.4	15.0	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	24,747	24,747	1.07	3.78	25,899
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.17	5.66	110	0.00	0.00	53.3	53.3	0.00	12.5	12.5	—	43,888	43,888	0.51	0.38	44,026
Vendor	0.62	19.5	10.6	0.19	0.19	7.32	7.52	0.19	2.03	2.22	—	17,711	17,711	0.77	2.70	18,539
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.49	1.03	20.1	0.00	0.00	9.72	9.72	0.00	2.28	2.28	—	7,266	7,266	0.08	0.06	7,289
Vendor	0.11	3.56	1.94	0.04	0.04	1.34	1.37	0.04	0.37	0.41	—	2,932	2,932	0.13	0.45	3,069
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.37. Building Construction (2041) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.9	7.55	165	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	63,177	63,177	0.53	0.36	63,329
Vendor	0.90	25.4	14.6	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	24,120	24,120	1.03	3.78	25,279
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.0	7.91	144	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	60,171	60,171	0.71	0.53	60,349
Vendor	0.83	26.8	15.0	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	24,154	24,154	1.03	3.78	25,305
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.89	5.52	107	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	43,559	43,559	0.51	0.38	43,695
Vendor	0.62	19.0	10.6	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	17,239	17,239	0.74	2.70	18,063
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.44	1.01	19.6	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	7,212	7,212	0.08	0.06	7,234
Vendor	0.11	3.47	1.93	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	2,854	2,854	0.12	0.45	2,991
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.39. Building Construction (2042) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.7	7.55	162	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	62,910	62,910	0.53	0.36	63,057
Vendor	0.90	25.1	14.3	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	23,591	23,591	1.03	3.50	24,668
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.7	7.73	141	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	59,917	59,917	0.71	0.53	60,095
Vendor	0.83	26.4	14.7	0.27	0.27	10.3	10.6	0.27	2.85	3.13	—	23,626	23,626	1.03	3.50	24,696
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.64	5.52	105	0.00	0.00	53.1	53.1	0.00	12.4	12.4	—	43,374	43,374	0.51	0.38	43,509
Vendor	0.62	18.7	10.4	0.19	0.19	7.30	7.50	0.19	2.02	2.21	—	16,861	16,861	0.74	2.50	17,628

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.39	1.01	19.2	0.00	0.00	9.69	9.69	0.00	2.27	2.27	—	7,181	7,181	0.08	0.06	7,203
Vendor	0.11	3.42	1.89	0.04	0.04	1.33	1.37	0.04	0.37	0.40	—	2,792	2,792	0.12	0.41	2,918
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.41. Building Construction (2043) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.07	3.39	0.01	0.02	—	0.02	0.02	—	0.02	—	568	568	0.02	< 0.005	569
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.38	0.62	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	94.0	94.0	< 0.005	< 0.005	94.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.3	7.55	159	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	62,676	62,676	0.53	0.36	62,818
Vendor	0.90	24.7	14.0	0.27	0.27	10.1	10.3	0.27	2.85	3.13	—	23,127	23,127	1.03	3.50	24,203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.3	7.73	138	0.00	0.00	75.3	75.3	0.00	17.7	17.7	—	59,692	59,692	0.53	0.53	59,866
Vendor	0.83	26.0	14.4	0.27	0.27	10.1	10.3	0.27	2.85	3.13	—	23,162	23,162	1.03	3.50	24,233
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.45	1.83	34.1	0.00	0.00	17.6	17.6	0.00	4.12	4.12	—	14,325	14,325	0.13	0.13	14,368
Vendor	0.21	6.12	3.36	0.06	0.06	2.36	2.42	0.06	0.67	0.73	—	5,480	5,480	0.24	0.83	5,734
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.33	6.23	0.00	0.00	3.21	3.21	0.00	0.75	0.75	—	2,372	2,372	0.02	0.02	2,379
Vendor	0.04	1.12	0.61	0.01	0.01	0.43	0.44	0.01	0.12	0.13	—	907	907	0.04	0.14	949
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.43. Paving (2043) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	3.41	5.02	0.01	0.04	—	0.04	0.04	—	0.04	—	715	715	0.03	0.01	718
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.62	0.92	< 0.005	0.01	—	0.01	0.01	—	0.01	—	118	118	< 0.005	< 0.005	119
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.30	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	116	116	< 0.005	< 0.005	117
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.26	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	111	111	< 0.005	< 0.005	111
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	53.2	53.2	< 0.005	< 0.005	53.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.80	8.80	< 0.005	< 0.005	8.83
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.45. Paving (2044) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	2.48	3.65	< 0.005	0.03	—	0.03	0.03	—	0.03	—	520	520	0.02	< 0.005	522
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.45	0.67	< 0.005	0.01	—	0.01	0.01	—	0.01	—	86.1	86.1	< 0.005	< 0.005	86.4
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.29	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	116	116	< 0.005	< 0.005	116
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.26	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	110	110	< 0.005	< 0.005	111
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.09	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	38.5	38.5	< 0.005	< 0.005	38.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.38	6.38	< 0.005	< 0.005	6.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.47. Architectural Coating (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134

Architectural	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.61	2.61	< 0.005	< 0.005	2.62
Architectural Coatings	0.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.43	0.43	< 0.005	< 0.005	0.43
Architectural Coatings	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.21	2.12	33.3	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,460	12,460	0.14	0.11	12,496
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.06	0.04	0.67	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	247	247	< 0.005	< 0.005	248
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	40.9	40.9	< 0.005	< 0.005	41.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.49. Architectural Coating (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7
Architectural Coatings	31.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	5.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.14	1.55	36.5	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,978	12,978	0.14	0.11	13,025
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.14	2.09	32.0	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,360	12,360	0.14	0.11	12,395
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.22	1.49	23.7	0.00	0.00	10.6	10.6	0.00	2.49	2.49	—	8,947	8,947	0.10	0.08	8,976

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.27	4.33	0.00	0.00	1.94	1.94	0.00	0.45	0.45	—	1,481	1,481	0.02	0.01	1,486
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.51. Architectural Coating (2038) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7
Architectural Coatings	31.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	5.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.00	1.55	35.3	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,847	12,847	0.14	0.11	12,893
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.53	2.09	30.8	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,236	12,236	0.14	0.11	12,271
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.81	1.47	23.2	0.00	0.00	10.6	10.6	0.00	2.49	2.49	—	8,857	8,857	0.10	0.08	8,886

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.27	4.24	0.00	0.00	1.94	1.94	0.00	0.45	0.45	—	1,466	1,466	0.02	0.01	1,471
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.53. Architectural Coating (2039) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7
Architectural Coatings	31.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	5.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.39	1.55	34.7	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,767	12,767	0.14	0.11	12,811
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.39	1.58	30.1	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,159	12,159	0.14	0.11	12,194
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.73	1.13	22.4	0.00	0.00	10.6	10.6	0.00	2.49	2.49	—	8,802	8,802	0.10	0.08	8,830

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.21	4.08	0.00	0.00	1.94	1.94	0.00	0.45	0.45	—	1,457	1,457	0.02	0.01	1,462
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.55. Architectural Coating (2040) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.77	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.6	95.6	< 0.005	< 0.005	96.0
Architectural Coatings	31.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.9
Architectural Coatings	5.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.35	1.51	33.6	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,696	12,696	0.11	0.11	12,738
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.32	1.58	29.4	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,092	12,092	0.14	0.11	12,127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.63	1.13	22.0	0.00	0.00	10.7	10.7	0.00	2.50	2.50	—	8,778	8,778	0.10	0.08	8,805

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.21	4.01	0.00	0.00	1.94	1.94	0.00	0.46	0.46	—	1,453	1,453	0.02	0.01	1,458
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.57. Architectural Coating (2041) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7
Architectural Coatings	31.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	5.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.17	1.51	33.0	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,635	12,635	0.11	0.07	12,666
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.21	1.58	28.8	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,034	12,034	0.14	0.11	12,070
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.58	1.10	21.5	0.00	0.00	10.6	10.6	0.00	2.49	2.49	—	8,712	8,712	0.10	0.08	8,739

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.20	3.91	0.00	0.00	1.94	1.94	0.00	0.45	0.45	—	1,442	1,442	0.02	0.01	1,447
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.59. Architectural Coating (2042) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7
Architectural Coatings	31.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	5.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.14	1.51	32.4	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,582	12,582	0.11	0.07	12,611
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.14	1.55	28.2	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	11,983	11,983	0.14	0.11	12,019
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.53	1.10	21.0	0.00	0.00	10.6	10.6	0.00	2.49	2.49	—	8,675	8,675	0.10	0.08	8,702

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.20	3.83	0.00	0.00	1.94	1.94	0.00	0.45	0.45	—	1,436	1,436	0.02	0.01	1,441
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.61. Architectural Coating (2043) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7
Architectural Coatings	31.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	5.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.07	1.51	31.8	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,535	12,535	0.11	0.07	12,564
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.07	1.55	27.6	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	11,938	11,938	0.11	0.11	11,973
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.48	1.10	20.6	0.00	0.00	10.6	10.6	0.00	2.49	2.49	—	8,642	8,642	0.08	0.08	8,669

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.20	3.76	0.00	0.00	1.94	1.94	0.00	0.45	0.45	—	1,431	1,431	0.01	0.01	1,435
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.63. Architectural Coating (2044) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.77	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.6	95.6	< 0.005	< 0.005	96.0
Architectural Coatings	31.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.9
Architectural Coatings	5.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.03	1.47	31.7	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	12,496	12,496	0.11	0.07	12,523
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.03	1.55	27.5	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	11,901	11,901	0.11	0.11	11,935
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.45	1.08	20.6	0.00	0.00	10.7	10.7	0.00	2.50	2.50	—	8,639	8,639	0.08	0.08	8,665

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.20	3.76	0.00	0.00	1.94	1.94	0.00	0.46	0.46	—	1,430	1,430	0.01	0.01	1,435
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.65. Architectural Coating (2045) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.57	1.57	< 0.005	< 0.005	1.57
Architectural Coatings	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	0.26
Architectural Coatings	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.96	1.51	27.4	0.00	0.00	15.1	15.1	0.00	3.53	3.53	—	11,867	11,867	0.11	0.11	11,902
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.34	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	141	141	< 0.005	< 0.005	142
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	23.4	23.4	< 0.005	< 0.005	23.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	14.3	7.35	104	0.29	0.10	33.6	33.7	0.10	8.52	8.62	—	29,273	29,273	1.13	1.12	29,641
Apartments Mid Rise	73.8	37.8	537	1.48	0.53	173	173	0.49	43.8	44.3	—	150,635	150,635	5.79	5.75	152,529
Hotel	3.84	2.21	33.4	0.10	0.03	11.5	11.5	0.03	2.91	2.95	—	9,919	9,919	0.34	0.35	10,033
Regional Shopping Center	71.4	32.1	416	1.05	0.39	120	121	0.37	30.6	30.9	—	106,795	106,795	4.96	4.66	108,334
General Office Building	35.1	20.1	305	0.89	0.31	105	105	0.29	26.6	26.9	—	90,497	90,497	3.06	3.17	91,539
Retirement Community	6.41	3.28	46.6	0.13	0.05	15.0	15.1	0.04	3.81	3.85	—	13,082	13,082	0.50	0.50	13,246
High School	6.91	3.96	60.1	0.18	0.06	20.7	20.7	0.06	5.24	5.30	—	17,828	17,828	0.60	0.62	18,033
City Park	5.74	3.29	49.9	0.15	0.05	17.2	17.2	0.05	4.35	4.40	—	14,817	14,817	0.50	0.52	14,987
Total	217	110	1,552	4.25	1.52	496	498	1.42	126	127	—	432,845	432,845	16.9	16.7	438,343

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	14.4	8.01	98.2	0.28	0.10	33.6	33.7	0.10	8.52	8.62	—	28,132	28,132	1.17	1.17	28,510
Apartments Mid Rise	74.0	41.2	505	1.42	0.53	173	173	0.49	43.8	44.3	—	144,763	144,763	6.03	6.02	146,708
Hotel	3.85	2.40	31.0	0.09	0.03	11.5	11.5	0.03	2.91	2.95	—	9,528	9,528	0.35	0.36	9,644
Regional Shopping Center	71.6	35.0	402	1.01	0.39	120	121	0.37	30.6	30.9	—	102,721	102,721	5.22	4.89	104,309
General Office Building	35.1	21.9	282	0.85	0.31	105	105	0.29	26.6	26.9	—	86,926	86,926	3.16	3.31	87,993
Retirement Community	6.43	3.58	43.9	0.12	0.05	15.0	15.1	0.04	3.81	3.85	—	12,572	12,572	0.52	0.52	12,741
High School	6.92	4.32	55.6	0.17	0.06	20.7	20.7	0.06	5.24	5.30	—	17,124	17,124	0.62	0.65	17,335
City Park	5.75	3.59	46.2	0.14	0.05	17.2	17.2	0.05	4.35	4.40	—	14,232	14,232	0.52	0.54	14,407
Total	218	120	1,465	4.08	1.53	496	498	1.42	126	127	—	415,998	415,998	17.6	17.5	421,646
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.60	1.46	18.3	0.05	0.02	6.05	6.07	0.02	1.54	1.55	—	4,708	4,708	0.19	0.19	4,771
Apartments Mid Rise	13.4	7.53	94.1	0.26	0.10	31.1	31.2	0.09	7.90	7.99	—	24,229	24,229	0.99	1.00	24,553
Hotel	0.70	0.44	5.79	0.02	0.01	2.07	2.08	0.01	0.53	0.53	—	1,595	1,595	0.06	0.06	1,614
Regional Shopping Center	12.8	6.15	70.9	0.17	0.07	20.1	20.1	0.06	5.09	5.16	—	15,963	15,963	0.83	0.77	16,217

General Office Building	6.34	4.02	52.8	0.16	0.06	18.9	18.9	0.05	4.79	4.85	—	14,551	14,551	0.52	0.55	14,729
Retirement Community	1.16	0.65	8.17	0.02	0.01	2.71	2.71	0.01	0.69	0.69	—	2,104	2,104	0.09	0.09	2,132
High School	1.25	0.79	10.4	0.03	0.01	3.72	3.73	0.01	0.94	0.95	—	2,866	2,866	0.10	0.11	2,902
City Park	1.04	0.66	8.64	0.03	0.01	3.09	3.10	0.01	0.78	0.79	—	2,382	2,382	0.09	0.09	2,412
Total	39.2	21.7	269	0.74	0.27	87.8	88.0	0.26	22.3	22.5	—	68,399	68,399	2.87	2.86	69,330

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	8,130	8,130	0.50	0.06	8,161
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	46,200	46,200	2.87	0.35	46,375
Hotel	—	—	—	—	—	—	—	—	—	—	—	1,468	1,468	0.09	0.01	1,474
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	15,534	15,534	0.96	0.12	15,593
General Office Building	—	—	—	—	—	—	—	—	—	—	—	42,094	42,094	2.61	0.32	42,254

Retiremen Community	—	—	—	—	—	—	—	—	—	—	—	4,421	4,421	0.27	0.03	4,438
High School	—	—	—	—	—	—	—	—	—	—	—	2,157	2,157	0.13	0.02	2,166
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	120,006	120,006	7.44	0.90	120,461
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	8,130	8,130	0.50	0.06	8,161
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	46,200	46,200	2.87	0.35	46,375
Hotel	—	—	—	—	—	—	—	—	—	—	—	1,468	1,468	0.09	0.01	1,474
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	15,534	15,534	0.96	0.12	15,593
General Office Building	—	—	—	—	—	—	—	—	—	—	—	42,094	42,094	2.61	0.32	42,254
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	4,421	4,421	0.27	0.03	4,438
High School	—	—	—	—	—	—	—	—	—	—	—	2,157	2,157	0.13	0.02	2,166
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	120,006	120,006	7.44	0.90	120,461
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,346	1,346	0.08	0.01	1,351

Apartment Mid Rise	—	—	—	—	—	—	—	—	—	—	—	7,649	7,649	0.47	0.06	7,678
Hotel	—	—	—	—	—	—	—	—	—	—	—	243	243	0.02	< 0.005	244
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	2,572	2,572	0.16	0.02	2,582
General Office Building	—	—	—	—	—	—	—	—	—	—	—	6,969	6,969	0.43	0.05	6,996
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	732	732	0.05	0.01	735
High School	—	—	—	—	—	—	—	—	—	—	—	357	357	0.02	< 0.005	359
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	19,868	19,868	1.23	0.15	19,944

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.46	7.83	3.33	0.05	0.63	—	0.63	0.63	—	0.63	—	9,939	9,939	0.88	0.02	9,967
Apartments Mid Rise	1.42	24.2	10.3	0.15	1.96	—	1.96	1.96	—	1.96	—	30,780	30,780	2.72	0.06	30,865
Hotel	0.03	0.56	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	666	666	0.06	< 0.005	668
Regional Shopping Center	0.10	1.75	1.47	0.01	0.13	—	0.13	0.13	—	0.13	—	2,082	2,082	0.18	< 0.005	2,088

General Office Building	0.61	11.0	9.27	0.07	0.84	—	0.84	0.84	—	0.84	—	13,165	13,165	1.17	0.02	13,202
Retirement Community	0.19	3.26	1.39	0.02	0.26	—	0.26	0.26	—	0.26	—	4,134	4,134	0.37	0.01	4,145
High School	0.07	1.33	1.12	0.01	0.10	—	0.10	0.10	—	0.10	—	1,591	1,591	0.14	< 0.005	1,596
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	2.87	50.0	27.4	0.31	3.97	—	3.97	3.97	—	3.97	—	62,357	62,357	5.52	0.12	62,530
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.46	7.83	3.33	0.05	0.63	—	0.63	0.63	—	0.63	—	9,939	9,939	0.88	0.02	9,967
Apartments Mid Rise	1.42	24.2	10.3	0.15	1.96	—	1.96	1.96	—	1.96	—	30,780	30,780	2.72	0.06	30,865
Hotel	0.03	0.56	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	666	666	0.06	< 0.005	668
Regional Shopping Center	0.10	1.75	1.47	0.01	0.13	—	0.13	0.13	—	0.13	—	2,082	2,082	0.18	< 0.005	2,088
General Office Building	0.61	11.0	9.27	0.07	0.84	—	0.84	0.84	—	0.84	—	13,165	13,165	1.17	0.02	13,202
Retirement Community	0.19	3.26	1.39	0.02	0.26	—	0.26	0.26	—	0.26	—	4,134	4,134	0.37	0.01	4,145
High School	0.07	1.33	1.12	0.01	0.10	—	0.10	0.10	—	0.10	—	1,591	1,591	0.14	< 0.005	1,596
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	2.87	50.0	27.4	0.31	3.97	—	3.97	3.97	—	3.97	—	62,357	62,357	5.52	0.12	62,530

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.08	1.43	0.61	0.01	0.12	—	0.12	0.12	—	0.12	—	1,646	1,646	0.15	< 0.005	1,650
Apartments Mid Rise	0.26	4.43	1.88	0.03	0.36	—	0.36	0.36	—	0.36	—	5,096	5,096	0.45	0.01	5,110
Hotel	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	110	110	0.01	< 0.005	111
Regional Shopping Center	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	345	345	0.03	< 0.005	346
General Office Building	0.11	2.01	1.69	0.01	0.15	—	0.15	0.15	—	0.15	—	2,180	2,180	0.19	< 0.005	2,186
Retirement Community	0.03	0.59	0.25	< 0.005	0.05	—	0.05	0.05	—	0.05	—	684	684	0.06	< 0.005	686
High School	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	263	263	0.02	< 0.005	264
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.52	9.13	4.99	0.06	0.72	—	0.72	0.72	—	0.72	—	10,324	10,324	0.91	0.02	10,353

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	8.45	144	61.5	0.92	11.7	—	11.7	11.7	—	11.7	0.00	186,349	186,349	3.64	0.37	186,549

Consumer Products	286	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	72.0	6.47	715	0.03	0.49	—	0.49	0.37	—	0.37	—	2,093	2,093	0.09	0.02	2,101
Total	392	151	777	0.96	12.2	—	12.2	12.1	—	12.1	0.00	188,442	188,442	3.72	0.39	188,650
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	8.45	144	61.5	0.92	11.7	—	11.7	11.7	—	11.7	0.00	186,349	186,349	3.64	0.37	186,549
Consumer Products	286	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	320	144	61.5	0.92	11.7	—	11.7	11.7	—	11.7	0.00	186,349	186,349	3.64	0.37	186,549
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.11	1.81	0.77	0.01	0.15	—	0.15	0.15	—	0.15	0.00	2,113	2,113	0.04	< 0.005	2,115
Consumer Products	52.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	4.64	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	9.01	0.81	89.4	< 0.005	0.06	—	0.06	0.05	—	0.05	—	237	237	0.01	< 0.005	238
Total	65.9	2.61	90.2	0.02	0.21	—	0.21	0.19	—	0.19	0.00	2,351	2,351	0.05	0.01	2,354

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	58.2	1,462	1,520	6.06	0.15	1,717
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	622	3,219	3,841	64.0	1.54	5,899
Hotel	—	—	—	—	—	—	—	—	—	—	11.7	60.7	72.4	1.20	0.03	111
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	154	798	952	15.8	0.38	1,461
General Office Building	—	—	—	—	—	—	—	—	—	—	552	2,858	3,410	56.8	1.37	5,236
Retirement Community	—	—	—	—	—	—	—	—	—	—	56.9	295	351	5.85	0.14	540
High School	—	—	—	—	—	—	—	—	—	—	15.1	78.0	93.0	1.55	0.04	143
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	1,470	8,770	10,240	151	3.65	15,107
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	58.2	1,462	1,520	6.06	0.15	1,717
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	622	3,219	3,841	64.0	1.54	5,899
Hotel	—	—	—	—	—	—	—	—	—	—	11.7	60.7	72.4	1.20	0.03	111
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	154	798	952	15.8	0.38	1,461
General Office Building	—	—	—	—	—	—	—	—	—	—	552	2,858	3,410	56.8	1.37	5,236
Retirement Community	—	—	—	—	—	—	—	—	—	—	56.9	295	351	5.85	0.14	540
High School	—	—	—	—	—	—	—	—	—	—	15.1	78.0	93.0	1.55	0.04	143
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	1,470	8,770	10,240	151	3.65	15,107
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	9.63	242	252	1.00	0.03	284
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	103	533	636	10.6	0.25	977
Hotel	—	—	—	—	—	—	—	—	—	—	1.94	10.0	12.0	0.20	< 0.005	18.4
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	25.5	132	158	2.62	0.06	242
General Office Building	—	—	—	—	—	—	—	—	—	—	91.4	473	565	9.40	0.23	867

Retiremen Community	—	—	—	—	—	—	—	—	—	—	9.42	48.8	58.2	0.97	0.02	89.3
High School	—	—	—	—	—	—	—	—	—	—	2.49	12.9	15.4	0.26	0.01	23.7
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	243	1,452	1,695	25.0	0.60	2,501

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	345	0.00	345	34.5	0.00	1,206
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	3,446	0.00	3,446	344	0.00	12,057
Hotel	—	—	—	—	—	—	—	—	—	—	71.1	0.00	71.1	7.11	0.00	249
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	614	0.00	614	61.4	0.00	2,149
General Office Building	—	—	—	—	—	—	—	—	—	—	812	0.00	812	81.2	0.00	2,842
Retirement Community	—	—	—	—	—	—	—	—	—	—	1,160	0.00	1,160	116	0.00	4,058

High School	—	—	—	—	—	—	—	—	—	—	175	0.00	175	17.5	0.00	614
City Park	—	—	—	—	—	—	—	—	—	—	6.30	0.00	6.30	0.63	0.00	22.1
Total	—	—	—	—	—	—	—	—	—	—	6,630	0.00	6,630	663	0.00	23,196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	345	0.00	345	34.5	0.00	1,206
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	3,446	0.00	3,446	344	0.00	12,057
Hotel	—	—	—	—	—	—	—	—	—	—	71.1	0.00	71.1	7.11	0.00	249
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	614	0.00	614	61.4	0.00	2,149
General Office Building	—	—	—	—	—	—	—	—	—	—	812	0.00	812	81.2	0.00	2,842
Retirement Community	—	—	—	—	—	—	—	—	—	—	1,160	0.00	1,160	116	0.00	4,058
High School	—	—	—	—	—	—	—	—	—	—	175	0.00	175	17.5	0.00	614
City Park	—	—	—	—	—	—	—	—	—	—	6.30	0.00	6.30	0.63	0.00	22.1
Total	—	—	—	—	—	—	—	—	—	—	6,630	0.00	6,630	663	0.00	23,196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	57.1	0.00	57.1	5.70	0.00	200
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	571	0.00	571	57.0	0.00	1,996

Hotel	—	—	—	—	—	—	—	—	—	—	11.8	0.00	11.8	1.18	0.00	41.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	356
General Office Building	—	—	—	—	—	—	—	—	—	—	134	0.00	134	13.4	0.00	471
Retirement Community	—	—	—	—	—	—	—	—	—	—	192	0.00	192	19.2	0.00	672
High School	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.90	0.00	102
City Park	—	—	—	—	—	—	—	—	—	—	1.04	0.00	1.04	0.10	0.00	3.65
Total	—	—	—	—	—	—	—	—	—	—	1,098	0.00	1,098	110	0.00	3,840

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.3
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	59.5
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	113

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.21
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.94
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.98
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	199
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.3
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	59.5
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	113
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.21
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.94
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.98
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91

City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	199
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.87
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.84
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.6
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.86
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.65
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.99
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/6/2025	8/15/2025	5.00	160	—
Grading	Grading	8/18/2025	3/26/2027	5.00	420	—
Building Construction	Building Construction	3/29/2027	5/1/2043	5.00	4,200	—

Paving	Paving	5/4/2043	6/24/2044	5.00	300	—
Architectural Coating	Architectural Coating	12/22/2036	1/6/2045	5.00	2,100	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 4 Interim	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 4 Interim	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Interim	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Interim	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	13.2	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.75	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	13.2	LDA,LDT1,LDT2
Grading	Vendor	—	7.75	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	8,082	13.2	LDA,LDT1,LDT2
Building Construction	Vendor	1,589	7.75	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	13.2	LDA,LDT1,LDT2
Paving	Vendor	—	7.75	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	1,616	13.2	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.75	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	20,958,082	6,986,027	4,521,836	1,507,279	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	240	0.00	—
Grading	—	—	1,260	0.00	—
Paving	0.00	0.00	0.00	0.00	8.91

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	8.91	0%
Apartments Mid Rise	—	0%
Hotel	0.00	0%
Regional Shopping Center	0.00	0%
General Office Building	0.00	0%
Retirement Community	—	0%
High School	0.00	0%
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005
2029	0.00	532	0.03	< 0.005
2030	0.00	532	0.03	< 0.005
2031	0.00	532	0.03	< 0.005
2032	0.00	532	0.03	< 0.005
2033	0.00	532	0.03	< 0.005
2034	0.00	532	0.03	< 0.005
2035	0.00	532	0.03	< 0.005
2036	0.00	532	0.03	< 0.005

2037	0.00	532	0.03	< 0.005
2038	0.00	532	0.03	< 0.005
2039	0.00	532	0.03	< 0.005
2040	0.00	532	0.03	< 0.005
2041	0.00	532	0.03	< 0.005
2042	0.00	532	0.03	< 0.005
2043	0.00	532	0.03	< 0.005
2044	0.00	532	0.03	< 0.005
2045	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	7,629	7,629	7,629	2,784,538	47,546	47,546	47,546	17,354,177
Apartments Mid Rise	39,257	39,257	39,257	14,328,944	244,665	244,665	244,665	89,302,808
Hotel	1,926	1,926	1,926	702,840	16,266	16,266	16,266	5,936,988
Regional Shopping Center	40,163	40,163	40,163	14,659,452	152,569	170,559	170,559	57,563,736
General Office Building	17,568	17,568	17,568	6,412,462	148,403	148,403	148,403	54,166,933
Retirement Community	3,409	3,409	3,409	1,244,362	21,247	21,247	21,247	7,755,281
High School	3,461	3,461	3,461	1,263,250	29,235	29,235	29,235	10,670,847
City Park	2,876	2,876	2,876	1,049,886	24,297	24,297	24,297	8,868,529

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	688
Propane Fireplaces	0
Electric Fireplaces	40
No Fireplaces	81
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	7350
Propane Fireplaces	0
Electric Fireplaces	432
No Fireplaces	865
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Retirement Community	—
Wood Fireplaces	0
Gas Fireplaces	672

Propane Fireplaces	0
Electric Fireplaces	40
No Fireplaces	79
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
20958081.75	6,986,027	4,521,836	1,507,279	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	5,578,172	532	0.0330	0.0040	31,013,295
Apartments Mid Rise	31,698,467	532	0.0330	0.0040	96,040,871
Hotel	1,007,547	532	0.0330	0.0040	2,078,762
Regional Shopping Center	10,658,049	532	0.0330	0.0040	6,496,972

General Office Building	28,881,338	532	0.0330	0.0040	41,079,020
Retirement Community	3,033,521	532	0.0330	0.0040	12,897,789
High School	1,480,197	532	0.0330	0.0040	4,965,248
City Park	0.00	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	30,358,251	150,099,417
Apartments Mid Rise	324,484,296	0.00
Hotel	6,113,392	0.00
Regional Shopping Center	80,382,760	0.00
General Office Building	288,053,085	0.00
Retirement Community	29,682,789	0.00
High School	7,858,449	0.00
City Park	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	640	—
Apartments Mid Rise	6,394	—
Hotel	132	—
Regional Shopping Center	1,139	—
General Office Building	1,507	—

Retirement Community	2,152	—
High School	326	—
City Park	11.7	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Retirement Community	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Retirement Community	Household refrigerators and/or freezers	R-134a	1,430	0.22	0.60	0.00	1.00
High School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
High School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
High School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
High School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Construction: Off-Road Equipment	Assuming the use of Tier 4 construction equipment consistent with 2017 SEIR MM AQ-5.
Operations: Vehicle Data	The Modified Project would generate approximately 116,289 average daily trips.

Operations: Hearths	The proposed project would not include any wood burning fireplaces or wood stoves.
Land Use	The Modified Project would include 809 single family residential units, 8,647 multi-family housing units, 241 hotel rooms (72,000 sq ft), 1,085,190 sq ft of community commercial uses, 1,620,700 sq ft of office uses, 791 continuing care/senior housing units (471,000 sq ft), a high school with 1,784 students, 91 acres of passive park space, and 45 acres of active park space. Using default lot acreages.
Construction: Construction Phases	The project buildout year is assumed to be 2045. Additionally, this analysis assumes that project construction activities could occur anytime beginning January 2025. The project would not include any demolition activities and architectural coating activities would overlap with building construction.

Tustin Legacy Specific Plan - Approved Project Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Tustin Legacy Specific Plan - Approved Project
Construction Start Date	1/6/2025
Operational Year	2045
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	19.6
Location	33.71064826138891, -117.82125522627334
County	Orange
City	Tustin
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	6824
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.23

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	4,486	Dwelling Unit	118	4,306,560	0.00	—	13,368	—
Hotel	550	Room	18.3	165,600	0.00	—	—	—
Strip Mall	95.2	1000sqft	2.19	95,200	0.00	—	—	—
Regional Shopping Center	1,568	1000sqft	36.0	1,568,090	0.00	—	—	—
General Office Building	420	1000sqft	9.64	420,000	0.00	—	—	—
Retirement Community	404	Dwelling Unit	80.8	1,000,000	0.00	—	1,204	—
High School	1,784	Student	5.43	236,667	0.00	0.00	—	—
City Park	136	Acre	136	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	37.8	42.4	188	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	64,339	64,339	1.88	4.58	65,928
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	38.0	43.7	168	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	62,437	62,437	1.95	4.58	63,855
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	26.9	30.5	118	0.13	0.20	38.7	38.9	0.19	9.25	9.45	—	44,230	44,230	1.40	3.28	45,291
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.91	5.56	21.6	0.02	0.04	7.07	7.11	0.04	1.69	1.72	—	7,323	7,323	0.23	0.54	7,499

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.87	19.5	36.2	0.06	0.18	7.83	7.93	0.18	3.98	4.08	—	6,789	6,789	0.27	0.06	6,815
2026	0.86	19.5	36.1	0.06	0.18	3.78	3.96	0.18	1.47	1.65	—	6,785	6,785	0.27	0.06	6,811
2027	12.8	42.4	188	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	64,339	64,339	1.88	4.58	65,928
2028	12.4	40.1	178	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	63,119	63,119	1.84	3.31	64,311
2029	12.0	39.1	169	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	61,890	61,890	1.84	3.31	63,065
2030	11.5	37.0	161	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	60,657	60,657	1.58	3.15	61,762
2031	10.9	36.1	153	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	59,418	59,418	1.56	3.15	60,506
2032	10.6	34.0	146	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	58,193	58,193	1.56	2.99	59,220
2033	10.2	33.2	140	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	57,040	57,040	1.40	2.99	58,050
2034	9.79	32.5	135	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	55,972	55,972	1.29	2.83	56,921
2035	9.81	31.7	130	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	54,974	54,974	1.29	2.83	55,912
2036	9.51	31.1	125	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	53,998	53,998	1.29	2.68	54,880
2037	37.8	31.3	143	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	60,309	60,309	1.37	2.73	61,209
2038	37.4	30.7	138	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	59,359	59,359	1.19	2.58	60,200
2039	35.4	30.3	136	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	58,669	58,669	1.19	2.58	59,502
2040	35.3	30.0	132	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	58,053	58,053	1.07	2.58	58,878
2041	34.7	29.6	130	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	57,509	57,509	1.05	2.46	58,294

2042	34.6	29.4	128	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	57,026	57,026	1.05	2.30	57,760
2043	34.3	29.2	126	0.18	0.28	54.6	54.9	0.27	13.1	13.4	—	56,604	56,604	1.05	2.30	57,334
2044	28.2	9.08	29.0	0.02	0.12	8.26	8.38	0.11	1.94	2.05	—	8,495	8,495	0.13	0.05	8,516
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.87	19.5	36.1	0.06	0.18	7.83	7.93	0.18	3.98	4.08	—	6,780	6,780	0.27	0.06	6,805
2026	0.86	19.5	36.0	0.06	0.18	3.78	3.96	0.18	1.47	1.65	—	6,776	6,776	0.27	0.06	6,801
2027	12.7	43.7	168	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	62,437	62,437	1.95	4.58	63,855
2028	12.3	42.6	160	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	61,254	61,254	1.95	4.58	62,671
2029	11.8	40.3	151	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	60,059	60,059	1.84	4.58	61,473
2030	11.4	39.3	144	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	58,858	58,858	1.68	3.15	59,843
2031	10.8	37.2	137	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	57,649	57,649	1.66	3.15	58,633
2032	10.5	36.3	132	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	56,451	56,451	1.56	2.99	57,385
2033	10.2	35.5	126	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	55,322	55,322	1.40	2.99	56,251
2034	9.87	33.5	121	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	54,274	54,274	1.38	2.83	55,155
2035	9.58	32.8	117	0.18	0.25	46.6	46.9	0.24	11.2	11.4	—	53,295	53,295	1.38	2.83	54,175
2036	38.0	34.4	133	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	59,187	59,187	1.37	2.73	60,037
2037	37.8	33.8	128	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	58,328	58,328	1.35	2.73	59,178
2038	35.8	33.2	124	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	57,401	57,401	1.19	2.58	58,200
2039	35.3	31.2	122	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	56,723	56,723	1.19	2.58	57,521
2040	35.1	31.0	119	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	56,117	56,117	1.19	2.58	56,916
2041	34.8	30.6	117	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	55,584	55,584	1.17	2.58	56,382
2042	34.5	30.2	115	0.18	0.28	54.8	55.0	0.27	13.1	13.4	—	55,111	55,111	1.17	2.42	55,861
2043	34.3	30.0	113	0.18	0.28	54.6	54.9	0.27	13.1	13.4	—	54,695	54,695	1.05	2.42	55,442
2044	28.2	9.12	26.6	0.02	0.12	8.26	8.38	0.11	1.94	2.05	—	8,169	8,169	0.13	0.07	8,194
2045	27.9	1.88	15.7	< 0.005	0.03	8.12	8.15	0.03	1.90	1.93	—	6,530	6,530	0.06	0.06	6,549
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.54	11.7	22.3	0.04	0.09	4.44	4.53	0.09	2.13	2.23	—	4,197	4,197	0.17	0.04	4,212
2026	0.62	13.9	25.8	0.04	0.13	2.70	2.83	0.13	1.05	1.18	—	4,842	4,842	0.19	0.04	4,860
2027	7.05	27.7	100	0.11	0.16	25.7	25.9	0.16	6.25	6.41	—	35,371	35,371	1.11	2.50	36,186
2028	8.89	30.5	118	0.13	0.18	33.0	33.2	0.17	7.91	8.08	—	44,230	44,230	1.40	3.28	45,291
2029	8.37	28.8	112	0.13	0.18	32.9	33.1	0.17	7.89	8.06	—	43,249	43,249	1.31	3.27	44,300
2030	8.16	28.1	107	0.13	0.18	32.9	33.1	0.17	7.89	8.06	—	42,385	42,385	1.20	2.25	43,124
2031	7.75	26.6	101	0.13	0.18	32.9	33.1	0.17	7.89	8.06	—	41,515	41,515	1.18	2.25	42,249
2032	7.50	26.0	97.4	0.13	0.18	33.0	33.2	0.17	7.91	8.08	—	40,765	40,765	1.12	2.14	41,462
2033	7.27	25.3	93.2	0.13	0.18	32.9	33.1	0.17	7.89	8.06	—	39,843	39,843	1.00	2.14	40,531
2034	7.00	23.8	89.6	0.13	0.18	32.9	33.1	0.17	7.89	8.06	—	39,091	39,091	0.99	2.02	39,741
2035	6.86	23.4	85.9	0.13	0.18	32.9	33.1	0.17	7.89	8.06	—	38,387	38,387	0.99	2.02	39,034
2036	7.37	23.0	84.0	0.13	0.18	33.2	33.3	0.17	7.95	8.12	—	37,939	37,939	0.92	1.92	38,550
2037	26.9	24.1	94.4	0.13	0.20	38.6	38.8	0.19	9.23	9.42	—	42,040	42,040	0.96	1.95	42,662
2038	25.6	23.6	92.5	0.13	0.20	38.6	38.8	0.19	9.23	9.42	—	41,373	41,373	0.85	1.84	41,956
2039	25.3	22.2	89.6	0.13	0.20	38.6	38.8	0.19	9.23	9.42	—	40,886	40,886	0.85	1.84	41,467
2040	25.1	22.1	88.2	0.13	0.20	38.7	38.9	0.19	9.25	9.45	—	40,564	40,564	0.85	1.84	41,144
2041	24.8	21.7	86.5	0.13	0.20	38.6	38.8	0.19	9.23	9.42	—	40,070	40,070	0.83	1.84	40,647
2042	24.7	21.5	84.9	0.13	0.20	38.6	38.8	0.19	9.23	9.42	—	39,729	39,729	0.83	1.73	40,271
2043	21.6	11.4	40.7	0.05	0.12	16.7	16.8	0.12	3.97	4.09	—	17,018	17,018	0.31	0.61	17,209
2044	20.1	3.84	15.5	0.01	0.05	5.79	5.84	0.05	1.36	1.40	—	5,311	5,311	0.07	0.05	5,327
2045	0.33	0.02	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	77.7	77.7	< 0.005	< 0.005	77.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.10	2.13	4.07	0.01	0.02	0.81	0.83	0.02	0.39	0.41	—	695	695	0.03	0.01	697
2026	0.11	2.54	4.70	0.01	0.02	0.49	0.52	0.02	0.19	0.21	—	802	802	0.03	0.01	805
2027	1.29	5.06	18.3	0.02	0.03	4.69	4.72	0.03	1.14	1.17	—	5,856	5,856	0.18	0.41	5,991
2028	1.62	5.56	21.6	0.02	0.03	6.02	6.05	0.03	1.44	1.48	—	7,323	7,323	0.23	0.54	7,499
2029	1.53	5.25	20.4	0.02	0.03	6.01	6.04	0.03	1.44	1.47	—	7,160	7,160	0.22	0.54	7,334

2030	1.49	5.13	19.5	0.02	0.03	6.01	6.04	0.03	1.44	1.47	—	7,017	7,017	0.20	0.37	7,140
2031	1.41	4.86	18.4	0.02	0.03	6.01	6.04	0.03	1.44	1.47	—	6,873	6,873	0.20	0.37	6,995
2032	1.37	4.74	17.8	0.02	0.03	6.02	6.05	0.03	1.44	1.48	—	6,749	6,749	0.19	0.36	6,865
2033	1.33	4.61	17.0	0.02	0.03	6.01	6.04	0.03	1.44	1.47	—	6,596	6,596	0.17	0.35	6,710
2034	1.28	4.34	16.3	0.02	0.03	6.01	6.04	0.03	1.44	1.47	—	6,472	6,472	0.16	0.34	6,580
2035	1.25	4.26	15.7	0.02	0.03	6.01	6.04	0.03	1.44	1.47	—	6,355	6,355	0.16	0.34	6,462
2036	1.34	4.20	15.3	0.02	0.03	6.05	6.08	0.03	1.45	1.48	—	6,281	6,281	0.15	0.32	6,382
2037	4.91	4.39	17.2	0.02	0.04	7.05	7.09	0.04	1.68	1.72	—	6,960	6,960	0.16	0.32	7,063
2038	4.67	4.30	16.9	0.02	0.04	7.05	7.09	0.04	1.68	1.72	—	6,850	6,850	0.14	0.30	6,946
2039	4.62	4.05	16.4	0.02	0.04	7.05	7.09	0.04	1.68	1.72	—	6,769	6,769	0.14	0.30	6,865
2040	4.58	4.03	16.1	0.02	0.04	7.07	7.11	0.04	1.69	1.72	—	6,716	6,716	0.14	0.31	6,812
2041	4.53	3.96	15.8	0.02	0.04	7.05	7.09	0.04	1.68	1.72	—	6,634	6,634	0.14	0.30	6,730
2042	4.50	3.93	15.5	0.02	0.04	7.05	7.09	0.04	1.68	1.72	—	6,578	6,578	0.14	0.29	6,667
2043	3.94	2.08	7.43	0.01	0.02	3.04	3.06	0.02	0.72	0.75	—	2,818	2,818	0.05	0.10	2,849
2044	3.66	0.70	2.83	< 0.005	0.01	1.06	1.07	0.01	0.25	0.26	—	879	879	0.01	0.01	882
2045	0.06	< 0.005	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	12.9

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	444	201	1,902	4.57	9.10	463	472	8.93	117	126	4,649	593,114	597,762	492	18.6	616,006
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	403	207	1,438	4.40	8.78	463	471	8.69	117	126	4,649	576,229	580,878	492	19.4	599,266

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	400	129	1,498	3.45	3.59	385	389	3.46	97.8	101	4,649	437,668	442,316	488	16.8	459,888
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	72.9	23.6	273	0.63	0.66	70.3	71.0	0.63	17.8	18.5	770	72,461	73,230	80.8	2.79	76,140

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	215	106	1,473	3.97	1.44	463	464	1.34	117	119	—	404,714	404,714	16.3	16.0	409,975
Area	228	72.4	416	0.46	5.89	—	5.89	5.81	—	5.81	0.00	90,114	90,114	1.79	0.19	90,214
Energy	1.28	22.4	12.9	0.14	1.77	—	1.77	1.77	—	1.77	—	94,285	94,285	6.58	0.55	94,614
Water	—	—	—	—	—	—	—	—	—	—	773	4,000	4,773	79.5	1.91	7,329
Waste	—	—	—	—	—	—	—	—	—	—	3,876	0.00	3,876	387	0.00	13,561
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	312
Total	444	201	1,902	4.57	9.10	463	472	8.93	117	126	4,649	593,114	597,762	492	18.6	616,006
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	216	116	1,396	3.82	1.44	463	464	1.34	117	119	—	389,016	389,016	17.0	16.7	394,425
Area	186	68.9	29.3	0.44	5.57	—	5.57	5.57	—	5.57	0.00	88,928	88,928	1.74	0.18	89,024
Energy	1.28	22.4	12.9	0.14	1.77	—	1.77	1.77	—	1.77	—	94,285	94,285	6.58	0.55	94,614
Water	—	—	—	—	—	—	—	—	—	—	773	4,000	4,773	79.5	1.91	7,329
Waste	—	—	—	—	—	—	—	—	—	—	3,876	0.00	3,876	387	0.00	13,561
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	312

Total	403	207	1,438	4.40	8.78	463	471	8.69	117	126	4,649	576,229	580,878	492	19.4	599,266
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	187	99.9	1,218	3.26	1.22	385	387	1.14	97.8	98.9	—	332,479	332,479	14.6	14.4	337,158
Area	211	7.10	267	0.04	0.60	—	0.60	0.55	—	0.55	0.00	6,903	6,903	0.15	0.02	6,913
Energy	1.28	22.4	12.9	0.14	1.77	—	1.77	1.77	—	1.77	—	94,285	94,285	6.58	0.55	94,614
Water	—	—	—	—	—	—	—	—	—	—	773	4,000	4,773	79.5	1.91	7,329
Waste	—	—	—	—	—	—	—	—	—	—	3,876	0.00	3,876	387	0.00	13,561
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	312
Total	400	129	1,498	3.45	3.59	385	389	3.46	97.8	101	4,649	437,668	442,316	488	16.8	459,888
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	34.2	18.2	222	0.60	0.22	70.3	70.6	0.21	17.8	18.1	—	55,046	55,046	2.42	2.38	55,820
Area	38.5	1.30	48.7	0.01	0.11	—	0.11	0.10	—	0.10	0.00	1,143	1,143	0.03	< 0.005	1,145
Energy	0.23	4.09	2.36	0.03	0.32	—	0.32	0.32	—	0.32	—	15,610	15,610	1.09	0.09	15,665
Water	—	—	—	—	—	—	—	—	—	—	128	662	790	13.2	0.32	1,213
Waste	—	—	—	—	—	—	—	—	—	—	642	0.00	642	64.1	0.00	2,245
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7
Total	72.9	23.6	273	0.63	0.66	70.3	71.0	0.63	17.8	18.5	770	72,461	73,230	80.8	2.79	76,140

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.64	14.7	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,295	5,295	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	14.7	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,295	5,295	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	6.46	12.4	0.02	0.04	—	0.04	0.04	—	0.04	—	2,321	2,321	0.09	0.02	2,329
Dust From Material Movement	—	—	—	—	—	3.36	3.36	—	1.73	1.73	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.18	2.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	384	384	0.02	< 0.005	386
Dust From Material Movement	—	—	—	—	—	0.61	0.61	—	0.32	0.32	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.73	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	166	166	< 0.005	0.01	169
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.65	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	158	158	< 0.005	0.01	160
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	70.4	70.4	< 0.005	< 0.005	71.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	11.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,599	6,599	0.27	0.05	6,622
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,599	6,599	0.27	0.05	6,622
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	5.17	9.41	0.02	0.05	—	0.05	0.05	—	0.05	—	1,756	1,756	0.07	0.01	1,762
Dust From Material Movement	—	—	—	—	—	0.96	0.96	—	0.38	0.38	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	1.72	< 0.005	0.01	—	0.01	0.01	—	0.01	—	291	291	0.01	< 0.005	292
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.07	0.07	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.84	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	190	190	< 0.005	0.01	193
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.74	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	181	181	< 0.005	0.01	183
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	48.9	48.9	< 0.005	< 0.005	49.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.09	8.09	< 0.005	< 0.005	8.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,599	6,599	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,599	6,599	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	13.9	25.2	0.04	0.13	—	0.13	0.13	—	0.13	—	4,713	4,713	0.19	0.04	4,729
Dust From Material Movement	—	—	—	—	—	2.56	2.56	—	1.02	1.02	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	2.53	4.61	0.01	0.02	—	0.02	0.02	—	0.02	—	780	780	0.03	0.01	783
Dust From Material Movement	—	—	—	—	—	0.47	0.47	—	0.19	0.19	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.79	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	187	187	< 0.005	0.01	189
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.69	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	178	178	< 0.005	0.01	180
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	< 0.005	0.01	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.3	21.3	< 0.005	< 0.005	21.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	19.4	35.3	0.06	0.18	—	0.18	0.18	—	0.18	—	6,598	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	3.23	5.88	0.01	0.03	—	0.03	0.03	—	0.03	—	1,098	1,098	0.04	0.01	1,101
Dust From Material Movement	—	—	—	—	—	0.60	0.60	—	0.24	0.24	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.59	1.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	182	182	0.01	< 0.005	182
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.65	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	175	175	< 0.005	0.01	177

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.5	29.5	< 0.005	< 0.005	29.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.88	4.88	< 0.005	< 0.005	4.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	4.75	7.78	0.01	0.05	—	0.05	0.05	—	0.05	—	1,304	1,304	0.05	0.01	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.87	1.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	216	216	0.01	< 0.005	217
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.9	10.0	161	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	39,970	39,970	0.58	1.55	40,574
Vendor	0.55	23.7	12.3	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	21,972	21,972	1.20	3.00	22,949
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.8	10.3	141	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	38,053	38,053	0.67	1.55	38,536
Vendor	0.53	24.7	12.6	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	21,987	21,987	1.18	3.00	22,913
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.44	6.23	79.9	0.00	0.00	21.8	21.8	0.00	5.11	5.11	—	20,983	20,983	0.37	0.85	21,274
Vendor	0.30	13.5	6.78	0.09	0.09	3.25	3.34	0.09	0.90	0.99	—	11,957	11,957	0.64	1.63	12,472
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.17	1.14	14.6	0.00	0.00	3.98	3.98	0.00	0.93	0.93	—	3,474	3,474	0.06	0.14	3,522

Vendor	0.05	2.46	1.24	0.02	0.02	0.59	0.61	0.02	0.16	0.18	—	1,980	1,980	0.11	0.27	2,065
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.26	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,717	1,717	0.07	0.01	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	284	284	0.01	< 0.005	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.5	8.64	152	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	39,257	39,257	0.58	0.29	39,470
Vendor	0.53	22.8	12.0	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	21,465	21,465	1.16	3.00	22,436
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.4	10.1	133	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	37,376	37,376	0.67	1.55	37,859
Vendor	0.53	23.8	12.3	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	21,481	21,481	1.18	3.00	22,407
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.27	7.23	99.3	0.00	0.00	28.7	28.7	0.00	6.72	6.72	—	27,134	27,134	0.48	1.11	27,513
Vendor	0.39	17.0	8.67	0.11	0.11	4.28	4.40	0.11	1.19	1.30	—	15,379	15,379	0.85	2.15	16,056
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.51	1.32	18.1	0.00	0.00	5.24	5.24	0.00	1.23	1.23	—	4,492	4,492	0.08	0.18	4,555
Vendor	0.07	3.10	1.58	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	2,546	2,546	0.14	0.36	2,658
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.2	8.54	143	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	38,594	38,594	0.58	0.29	38,794
Vendor	0.53	21.8	11.6	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	20,900	20,900	1.16	3.00	21,866
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.0	8.74	125	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	36,746	36,746	0.58	1.55	37,227

Vendor	0.51	22.8	11.9	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	20,916	20,916	1.16	3.00	21,841
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.77	6.24	93.3	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	26,604	26,604	0.41	1.11	26,976
Vendor	0.38	16.3	8.37	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	14,933	14,933	0.83	2.15	15,606
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.42	1.14	17.0	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	4,405	4,405	0.07	0.18	4,466
Vendor	0.07	2.97	1.53	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	2,472	2,472	0.14	0.36	2,584
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.7	7.18	136	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	37,975	37,975	0.48	0.29	38,162
Vendor	0.53	21.0	11.2	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	20,285	20,285	1.00	2.85	21,195
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.6	8.64	118	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	36,159	36,159	0.58	0.29	36,262
Vendor	0.51	21.9	11.5	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	20,302	20,302	1.00	2.85	21,176
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.56	6.17	88.5	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	26,178	26,178	0.41	0.21	26,277
Vendor	0.38	15.7	8.10	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	14,494	14,494	0.72	2.03	15,129
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.38	1.13	16.2	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	4,334	4,334	0.07	0.03	4,350

Vendor	0.07	2.87	1.48	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	2,400	2,400	0.12	0.34	2,505
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.1	7.08	128	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	37,410	37,410	0.48	0.29	37,586
Vendor	0.53	20.3	10.8	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	19,611	19,611	0.98	2.85	20,516
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.0	7.28	112	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	35,624	35,624	0.58	0.29	35,726
Vendor	0.51	21.2	11.1	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	19,628	19,628	0.98	2.85	20,501
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.15	5.20	83.0	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	25,790	25,790	0.41	0.21	25,885
Vendor	0.38	15.2	7.85	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	14,013	14,013	0.70	2.03	14,646
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.30	0.95	15.1	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	4,270	4,270	0.07	0.03	4,286
Vendor	0.07	2.77	1.43	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	2,320	2,320	0.12	0.34	2,425
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.19. Building Construction (2032) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.26	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,717	1,717	0.07	0.01	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	284	284	0.01	< 0.005	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.72	5.72	122	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	36,869	36,869	0.48	0.29	37,035
Vendor	0.53	19.5	10.5	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	18,928	18,928	0.98	2.69	19,781
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.72	7.18	107	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	35,109	35,109	0.48	0.29	35,208

Vendor	0.51	20.4	10.8	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	18,945	18,945	0.98	2.69	19,771
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.89	5.14	79.5	0.00	0.00	28.7	28.7	0.00	6.72	6.72	—	25,487	25,487	0.34	0.21	25,578
Vendor	0.38	14.6	7.61	0.11	0.11	4.28	4.40	0.11	1.19	1.30	—	13,562	13,562	0.70	1.92	14,162
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.26	0.94	14.5	0.00	0.00	5.24	5.24	0.00	1.23	1.23	—	4,220	4,220	0.06	0.03	4,235
Vendor	0.07	2.66	1.39	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	2,245	2,245	0.12	0.32	2,345
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.21. Building Construction (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.33	5.72	116	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	36,408	36,408	0.48	0.29	36,565
Vendor	0.53	18.8	10.1	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	18,235	18,235	0.83	2.69	19,080
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.33	7.08	102	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	34,672	34,672	0.48	0.29	34,771
Vendor	0.51	19.7	10.4	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	18,253	18,253	0.83	2.69	19,075
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.67	5.06	75.7	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	25,100	25,100	0.34	0.21	25,189
Vendor	0.38	14.0	7.32	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	13,031	13,031	0.59	1.92	13,624
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.22	0.92	13.8	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	4,156	4,156	0.06	0.03	4,170

Vendor	0.07	2.55	1.34	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	2,157	2,157	0.10	0.32	2,256
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.23. Building Construction (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.95	5.63	111	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	35,995	35,995	0.38	0.29	36,142
Vendor	0.53	18.2	9.95	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	17,581	17,581	0.80	2.53	18,374
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.05	5.82	96.6	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	34,278	34,278	0.48	0.29	34,377
Vendor	0.51	18.9	10.2	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	17,599	17,599	0.80	2.53	18,373
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.39	4.09	72.2	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	24,816	24,816	0.34	0.21	24,902
Vendor	0.38	13.4	7.19	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	12,563	12,563	0.57	1.81	13,122
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.17	0.75	13.2	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	4,109	4,109	0.06	0.03	4,123
Vendor	0.07	2.45	1.31	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	2,080	2,080	0.10	0.30	2,172
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.25. Building Construction (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.95	5.53	106	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	35,628	35,628	0.38	0.29	35,768
Vendor	0.55	17.4	9.61	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	16,949	16,949	0.80	2.53	17,739
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.76	5.72	93.0	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	33,930	33,930	0.48	0.29	34,029

Vendor	0.51	18.3	9.85	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	16,967	16,967	0.80	2.53	17,741
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.26	4.09	68.8	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	24,563	24,563	0.34	0.21	24,646
Vendor	0.38	13.0	6.94	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	12,112	12,112	0.57	1.81	12,669
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.14	0.75	12.5	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	4,067	4,067	0.06	0.03	4,080
Vendor	0.07	2.38	1.27	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	2,005	2,005	0.10	0.30	2,098
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.27. Building Construction (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.26	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,717	1,717	0.07	0.01	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	284	284	0.01	< 0.005	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.66	5.53	102	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	35,262	35,262	0.38	0.29	35,396
Vendor	0.53	16.9	9.41	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	16,339	16,339	0.80	2.37	17,080
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.66	5.72	89.7	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	33,582	33,582	0.38	0.29	33,678
Vendor	0.51	17.8	9.67	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	16,358	16,358	0.80	2.37	17,085
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.20	4.03	66.5	0.00	0.00	28.7	28.7	0.00	6.72	6.72	—	24,378	24,378	0.28	0.21	24,458
Vendor	0.38	12.7	6.84	0.11	0.11	4.28	4.40	0.11	1.19	1.30	—	11,709	11,709	0.58	1.70	12,233
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.13	0.74	12.1	0.00	0.00	5.24	5.24	0.00	1.23	1.23	—	4,036	4,036	0.05	0.03	4,049

Vendor	0.07	2.31	1.25	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	1,939	1,939	0.10	0.28	2,025
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.29. Building Construction (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.47	4.17	98.4	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	34,977	34,977	0.38	0.29	35,105
Vendor	0.53	16.5	9.23	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	15,807	15,807	0.80	2.37	16,544
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.47	5.63	86.3	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	33,310	33,310	0.38	0.29	33,406
Vendor	0.49	17.2	9.49	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	15,826	15,826	0.78	2.37	16,551
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.98	4.02	64.0	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	24,114	24,114	0.27	0.21	24,192
Vendor	0.36	12.2	6.69	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	11,296	11,296	0.56	1.69	11,818
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.09	0.73	11.7	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	3,992	3,992	0.05	0.03	4,005
Vendor	0.07	2.23	1.22	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	1,870	1,870	0.09	0.28	1,957
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.31. Building Construction (2038) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.09	4.17	95.3	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	34,624	34,624	0.38	0.29	34,747
Vendor	0.53	15.9	8.89	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	15,280	15,280	0.63	2.21	15,964
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.82	5.63	83.0	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	32,976	32,976	0.38	0.29	33,072

Vendor	0.49	16.6	9.16	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	15,300	15,300	0.63	2.21	15,974
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.87	3.95	62.6	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	23,871	23,871	0.27	0.21	23,948
Vendor	0.36	11.8	6.44	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	10,920	10,920	0.45	1.58	11,405
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.89	0.72	11.4	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	3,952	3,952	0.05	0.03	3,965
Vendor	0.07	2.16	1.17	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	1,808	1,808	0.07	0.26	1,888
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.33. Building Construction (2039) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.43	4.17	93.5	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	34,407	34,407	0.38	0.29	34,526
Vendor	0.53	15.5	8.73	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	14,850	14,850	0.63	2.21	15,532
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.43	4.26	81.2	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	32,769	32,769	0.38	0.29	32,865
Vendor	0.49	16.3	8.96	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	14,870	14,870	0.63	2.21	15,544
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.66	3.04	60.3	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	23,722	23,722	0.27	0.21	23,797
Vendor	0.36	11.5	6.32	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	10,613	10,613	0.45	1.58	11,097
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.85	0.56	11.0	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	3,927	3,927	0.05	0.03	3,940

Vendor	0.07	2.11	1.15	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	1,757	1,757	0.07	0.26	1,837
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.35. Building Construction (2040) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.26	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,717	1,717	0.07	0.01	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	284	284	0.01	< 0.005	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.34	4.07	90.5	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	34,217	34,217	0.29	0.29	34,331
Vendor	0.53	15.3	8.55	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	14,462	14,462	0.63	2.21	15,142
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.24	4.26	79.4	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	32,588	32,588	0.38	0.29	32,684
Vendor	0.49	16.0	8.78	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	14,481	14,481	0.63	2.21	15,156
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.40	3.05	59.2	0.00	0.00	28.7	28.7	0.00	6.72	6.72	—	23,656	23,656	0.28	0.21	23,731
Vendor	0.36	11.4	6.21	0.11	0.11	4.28	4.40	0.11	1.19	1.30	—	10,364	10,364	0.45	1.58	10,849
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.56	10.8	0.00	0.00	5.24	5.24	0.00	1.23	1.23	—	3,917	3,917	0.05	0.03	3,929
Vendor	0.07	2.08	1.13	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	1,716	1,716	0.07	0.26	1,796
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.37. Building Construction (2041) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.86	4.07	88.9	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	34,054	34,054	0.29	0.19	34,135
Vendor	0.53	14.9	8.53	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	14,114	14,114	0.60	2.21	14,793
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.95	4.26	77.6	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	32,433	32,433	0.38	0.29	32,529

Vendor	0.49	15.7	8.78	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	14,134	14,134	0.60	2.21	14,808
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.25	2.98	57.8	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	23,479	23,479	0.27	0.21	23,553
Vendor	0.36	11.1	6.18	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	10,087	10,087	0.43	1.58	10,570
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.78	0.54	10.6	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	3,887	3,887	0.05	0.03	3,899
Vendor	0.07	2.03	1.13	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	1,670	1,670	0.07	0.26	1,750
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.39. Building Construction (2042) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	6.24	10.2	0.02	0.06	—	0.06	0.06	—	0.06	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.14	1.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.76	4.07	87.3	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	33,909	33,909	0.29	0.19	33,989
Vendor	0.53	14.7	8.37	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	13,805	13,805	0.60	2.05	14,435
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.76	4.17	76.0	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	32,296	32,296	0.38	0.29	32,392
Vendor	0.49	15.4	8.60	0.16	0.16	6.05	6.21	0.16	1.67	1.83	—	13,825	13,825	0.60	2.05	14,451
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.12	2.98	56.6	0.00	0.00	28.6	28.6	0.00	6.71	6.71	—	23,380	23,380	0.27	0.21	23,452
Vendor	0.36	11.0	6.07	0.11	0.11	4.27	4.39	0.11	1.18	1.30	—	9,867	9,867	0.43	1.46	10,315
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.75	0.54	10.3	0.00	0.00	5.23	5.23	0.00	1.22	1.22	—	3,871	3,871	0.05	0.03	3,883

Vendor	0.07	2.00	1.11	0.02	0.02	0.78	0.80	0.02	0.22	0.24	—	1,634	1,634	0.07	0.24	1,708
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.41. Building Construction (2043) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.74	14.3	0.02	0.09	—	0.09	0.08	—	0.08	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.07	3.39	0.01	0.02	—	0.02	0.02	—	0.02	—	568	568	0.02	< 0.005	569
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.38	0.62	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	94.0	94.0	< 0.005	< 0.005	94.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.57	4.07	85.7	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	33,783	33,783	0.29	0.19	33,860
Vendor	0.53	14.5	8.21	0.16	0.16	5.89	6.05	0.16	1.67	1.83	—	13,533	13,533	0.60	2.05	14,163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.57	4.17	74.4	0.00	0.00	40.6	40.6	0.00	9.52	9.52	—	32,175	32,175	0.29	0.29	32,269
Vendor	0.49	15.2	8.44	0.16	0.16	5.89	6.05	0.16	1.67	1.83	—	13,554	13,554	0.60	2.05	14,180
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.32	0.99	18.4	0.00	0.00	9.49	9.49	0.00	2.22	2.22	—	7,721	7,721	0.07	0.07	7,745
Vendor	0.13	3.58	1.97	0.04	0.04	1.38	1.42	0.04	0.39	0.43	—	3,207	3,207	0.14	0.49	3,355
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.18	3.36	0.00	0.00	1.73	1.73	0.00	0.41	0.41	—	1,278	1,278	0.01	0.01	1,282
Vendor	0.02	0.65	0.36	0.01	0.01	0.25	0.26	0.01	0.07	0.08	—	531	531	0.02	0.08	555
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.43. Paving (2043) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	3.41	5.02	0.01	0.04	—	0.04	0.04	—	0.04	—	715	715	0.03	0.01	718
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.62	0.92	< 0.005	0.01	—	0.01	0.01	—	0.01	—	118	118	< 0.005	< 0.005	119
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.30	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	116	116	< 0.005	< 0.005	117
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.26	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	111	111	< 0.005	< 0.005	111
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	53.2	53.2	< 0.005	< 0.005	53.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.80	8.80	< 0.005	< 0.005	8.83
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.45. Paving (2044) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	7.21	10.6	0.01	0.09	—	0.09	0.08	—	0.08	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	2.48	3.65	< 0.005	0.03	—	0.03	0.03	—	0.03	—	520	520	0.02	< 0.005	522
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.45	0.67	< 0.005	0.01	—	0.01	0.01	—	0.01	—	86.1	86.1	< 0.005	< 0.005	86.4
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.29	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	116	116	< 0.005	< 0.005	116
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.26	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	110	110	< 0.005	< 0.005	111

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.09	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	38.5	38.5	< 0.005	< 0.005	38.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.38	6.38	< 0.005	< 0.005	6.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.47. Architectural Coating (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.61	2.61	< 0.005	< 0.005	2.62
Architectural Coatings	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.43	0.43	< 0.005	< 0.005	0.43
Architectural Coatings	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.73	1.14	17.9	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,716	6,716	0.08	0.06	6,736
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.36	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	133	133	< 0.005	< 0.005	134
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.07	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	22.1	22.1	< 0.005	< 0.005	22.1

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.49. Architectural Coating (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7

Architectural Coatings	19.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	3.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.69	0.83	19.7	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,995	6,995	0.08	0.06	7,021
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.69	1.13	17.3	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,662	6,662	0.08	0.06	6,681
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.20	0.80	12.8	0.00	0.00	5.73	5.73	0.00	1.34	1.34	—	4,823	4,823	0.05	0.04	4,838
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.22	0.15	2.34	0.00	0.00	1.05	1.05	0.00	0.24	0.24	—	798	798	0.01	0.01	801
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.51. Architectural Coating (2038) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7

Architectu Coatings	19.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectu ral Coatings	3.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.62	0.83	19.1	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,925	6,925	0.08	0.06	6,949
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.36	1.13	16.6	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,595	6,595	0.08	0.06	6,614
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.97	0.79	12.5	0.00	0.00	5.73	5.73	0.00	1.34	1.34	—	4,774	4,774	0.05	0.04	4,790
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.14	2.28	0.00	0.00	1.05	1.05	0.00	0.24	0.24	—	790	790	0.01	0.01	793

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.53. Architectural Coating (2039) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7

Architectural Coatings	19.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	3.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.29	0.83	18.7	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,881	6,881	0.08	0.06	6,905
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.29	0.85	16.2	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,554	6,554	0.08	0.06	6,573
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.93	0.61	12.1	0.00	0.00	5.73	5.73	0.00	1.34	1.34	—	4,744	4,744	0.05	0.04	4,759
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.17	0.11	2.20	0.00	0.00	1.05	1.05	0.00	0.24	0.24	—	785	785	0.01	0.01	788
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.55. Architectural Coating (2040) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.77	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.6	95.6	< 0.005	< 0.005	96.0

Architectu Coatings	19.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.9
Architectu ral Coatings	3.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.27	0.81	18.1	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,843	6,843	0.06	0.06	6,866
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.25	0.85	15.9	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,518	6,518	0.08	0.06	6,537
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.88	0.61	11.8	0.00	0.00	5.74	5.74	0.00	1.34	1.34	—	4,731	4,731	0.06	0.04	4,746
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.11	2.16	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	783	783	0.01	0.01	786

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.57. Architectural Coating (2041) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7

Architectural Coatings	19.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	3.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.17	0.81	17.8	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,811	6,811	0.06	0.04	6,827
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.19	0.85	15.5	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,487	6,487	0.08	0.06	6,506
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.85	0.60	11.6	0.00	0.00	5.73	5.73	0.00	1.34	1.34	—	4,696	4,696	0.05	0.04	4,711
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.16	0.11	2.11	0.00	0.00	1.05	1.05	0.00	0.24	0.24	—	777	777	0.01	0.01	780
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.59. Architectural Coating (2042) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7

Architectu Coatings	19.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectu ral Coatings	3.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.15	0.81	17.5	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,782	6,782	0.06	0.04	6,798
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.15	0.83	15.2	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,459	6,459	0.08	0.06	6,478
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.82	0.60	11.3	0.00	0.00	5.73	5.73	0.00	1.34	1.34	—	4,676	4,676	0.05	0.04	4,690
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.11	2.07	0.00	0.00	1.05	1.05	0.00	0.24	0.24	—	774	774	0.01	0.01	777

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.61. Architectural Coating (2043) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	95.7

Architectural Coatings	19.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.8
Architectural Coatings	3.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.11	0.81	17.1	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,757	6,757	0.06	0.04	6,772
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.11	0.83	14.9	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,435	6,435	0.06	0.06	6,454
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.60	11.1	0.00	0.00	5.73	5.73	0.00	1.34	1.34	—	4,658	4,658	0.04	0.04	4,672
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.15	0.11	2.03	0.00	0.00	1.05	1.05	0.00	0.24	0.24	—	771	771	0.01	0.01	774
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.63. Architectural Coating (2044) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.77	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.6	95.6	< 0.005	< 0.005	96.0

Architectu Coatings	19.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	15.9
Architectu ral Coatings	3.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.09	0.79	17.1	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,735	6,735	0.06	0.04	6,750
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.09	0.83	14.8	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,415	6,415	0.06	0.06	6,433
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.78	0.58	11.1	0.00	0.00	5.74	5.74	0.00	1.34	1.34	—	4,656	4,656	0.04	0.04	4,670
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.11	2.02	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	771	771	0.01	0.01	773

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.65. Architectural Coating (2045) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.57	1.57	< 0.005	< 0.005	1.57
Architectural Coatings	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	0.26

Architectu Coatings	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.06	0.81	14.8	0.00	0.00	8.12	8.12	0.00	1.90	1.90	—	6,397	6,397	0.06	0.06	6,415
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.18	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	76.1	76.1	< 0.005	< 0.005	76.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	12.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	38.3	19.6	278	0.77	0.27	89.7	90.0	0.26	22.7	23.0	—	78,148	78,148	3.00	2.98	79,131
Hotel	8.77	5.03	76.3	0.22	0.08	26.2	26.3	0.07	6.65	6.72	—	22,637	22,637	0.77	0.79	22,897
Strip Mall	10.3	5.94	89.9	0.26	0.09	30.9	31.0	0.09	7.85	7.93	—	26,702	26,702	0.90	0.93	27,009
Regional Shopping Center	103	46.4	601	1.51	0.57	174	175	0.53	44.2	44.7	—	154,318	154,318	7.17	6.74	156,542
General Office Building	9.09	5.21	79.0	0.23	0.08	27.2	27.3	0.07	6.89	6.97	—	23,452	23,452	0.79	0.82	23,722
Retirement Community	32.7	16.8	238	0.66	0.23	76.7	76.9	0.22	19.4	19.7	—	66,813	66,813	2.57	2.55	67,653
High School	6.91	3.96	60.1	0.18	0.06	20.7	20.7	0.06	5.24	5.30	—	17,828	17,828	0.60	0.62	18,033
City Park	5.74	3.29	49.9	0.15	0.05	17.2	17.2	0.05	4.35	4.40	—	14,817	14,817	0.50	0.52	14,987
Total	215	106	1,473	3.97	1.44	463	464	1.34	117	119	—	404,714	404,714	16.3	16.0	409,975
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	38.4	21.4	262	0.74	0.27	89.7	90.0	0.26	22.7	23.0	—	75,102	75,102	3.13	3.12	76,111
Hotel	8.78	5.49	70.6	0.21	0.08	26.2	26.3	0.07	6.65	6.72	—	21,743	21,743	0.79	0.83	22,010
Strip Mall	10.4	6.47	83.3	0.25	0.09	30.9	31.0	0.09	7.85	7.93	—	25,648	25,648	0.93	0.98	25,963
Regional Shopping Center	103	50.5	581	1.46	0.57	174	175	0.53	44.2	44.7	—	148,430	148,430	7.55	7.06	150,725

General Office Building	9.10	5.69	73.2	0.22	0.08	27.2	27.3	0.07	6.89	6.97	—	22,527	22,527	0.82	0.86	22,803
Retirement Community	32.8	18.3	224	0.63	0.23	76.7	76.9	0.22	19.4	19.7	—	64,209	64,209	2.67	2.67	65,072
High School	6.92	4.32	55.6	0.17	0.06	20.7	20.7	0.06	5.24	5.30	—	17,124	17,124	0.62	0.65	17,335
City Park	5.75	3.59	46.2	0.14	0.05	17.2	17.2	0.05	4.35	4.40	—	14,232	14,232	0.52	0.54	14,407
Total	216	116	1,396	3.82	1.44	463	464	1.34	117	119	—	389,016	389,016	17.0	16.7	394,425
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	6.93	3.90	48.8	0.14	0.05	16.2	16.2	0.05	4.10	4.15	—	12,570	12,570	0.51	0.52	12,738
Hotel	1.59	1.01	13.2	0.04	0.01	4.73	4.74	0.01	1.20	1.21	—	3,640	3,640	0.13	0.14	3,684
Strip Mall	1.87	1.19	15.6	0.05	0.02	5.57	5.59	0.02	1.41	1.43	—	4,293	4,293	0.15	0.16	4,346
Regional Shopping Center	18.5	8.88	102	0.25	0.10	29.0	29.1	0.09	7.36	7.45	—	23,067	23,067	1.20	1.12	23,433
General Office Building	1.64	1.04	13.7	0.04	0.01	4.90	4.91	0.01	1.24	1.26	—	3,771	3,771	0.13	0.14	3,817
Retirement Community	1.35	0.76	9.54	0.03	0.01	3.16	3.17	0.01	0.80	0.81	—	2,456	2,456	0.10	0.10	2,489
High School	1.25	0.79	10.4	0.03	0.01	3.72	3.73	0.01	0.94	0.95	—	2,866	2,866	0.10	0.11	2,902
City Park	1.04	0.66	8.64	0.03	0.01	3.09	3.10	0.01	0.78	0.79	—	2,382	2,382	0.09	0.09	2,412
Total	34.2	18.2	222	0.60	0.22	70.3	70.6	0.21	17.8	18.1	—	55,046	55,046	2.42	2.38	55,820

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	23,968	23,968	1.49	0.18	24,059
Hotel	—	—	—	—	—	—	—	—	—	—	—	3,378	3,378	0.21	0.03	3,390
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,363	1,363	0.08	0.01	1,368
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	22,446	22,446	1.39	0.17	22,532
General Office Building	—	—	—	—	—	—	—	—	—	—	—	10,909	10,909	0.68	0.08	10,950
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	2,258	2,258	0.14	0.02	2,267
High School	—	—	—	—	—	—	—	—	—	—	—	2,157	2,157	0.13	0.02	2,166
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	66,479	66,479	4.12	0.50	66,731
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	23,968	23,968	1.49	0.18	24,059
Hotel	—	—	—	—	—	—	—	—	—	—	—	3,378	3,378	0.21	0.03	3,390
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,363	1,363	0.08	0.01	1,368

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	22,446	22,446	1.39	0.17	22,532
General Office Building	—	—	—	—	—	—	—	—	—	—	—	10,909	10,909	0.68	0.08	10,950
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	2,258	2,258	0.14	0.02	2,267
High School	—	—	—	—	—	—	—	—	—	—	—	2,157	2,157	0.13	0.02	2,166
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	66,479	66,479	4.12	0.50	66,731
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,968	3,968	0.25	0.03	3,983
Hotel	—	—	—	—	—	—	—	—	—	—	—	559	559	0.03	< 0.005	561
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	226	226	0.01	< 0.005	226
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	3,716	3,716	0.23	0.03	3,730
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,806	1,806	0.11	0.01	1,813
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	374	374	0.02	< 0.005	375
High School	—	—	—	—	—	—	—	—	—	—	—	357	357	0.02	< 0.005	359
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	11,006	11,006	0.68	0.08	11,048

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.74	12.6	5.35	0.08	1.02	—	1.02	1.02	—	1.02	—	15,968	15,968	1.41	0.03	16,013
Hotel	0.07	1.28	1.08	0.01	0.10	—	0.10	0.10	—	0.10	—	1,532	1,532	0.14	< 0.005	1,537
Strip Mall	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	183	183	0.02	< 0.005	183
Regional Shopping Center	0.14	2.52	2.12	0.02	0.19	—	0.19	0.19	—	0.19	—	3,009	3,009	0.27	0.01	3,017
General Office Building	0.16	2.86	2.40	0.02	0.22	—	0.22	0.22	—	0.22	—	3,412	3,412	0.30	0.01	3,421
Retirement Community	0.10	1.66	0.71	0.01	0.13	—	0.13	0.13	—	0.13	—	2,111	2,111	0.19	< 0.005	2,117
High School	0.07	1.33	1.12	0.01	0.10	—	0.10	0.10	—	0.10	—	1,591	1,591	0.14	< 0.005	1,596
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	1.28	22.4	12.9	0.14	1.77	—	1.77	1.77	—	1.77	—	27,806	27,806	2.46	0.05	27,883
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.74	12.6	5.35	0.08	1.02	—	1.02	1.02	—	1.02	—	15,968	15,968	1.41	0.03	16,013
Hotel	0.07	1.28	1.08	0.01	0.10	—	0.10	0.10	—	0.10	—	1,532	1,532	0.14	< 0.005	1,537
Strip Mall	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	183	183	0.02	< 0.005	183

Regional Shopping Center	0.14	2.52	2.12	0.02	0.19	—	0.19	0.19	—	0.19	—	3,009	3,009	0.27	0.01	3,017
General Office Building	0.16	2.86	2.40	0.02	0.22	—	0.22	0.22	—	0.22	—	3,412	3,412	0.30	0.01	3,421
Retirement Community	0.10	1.66	0.71	0.01	0.13	—	0.13	0.13	—	0.13	—	2,111	2,111	0.19	< 0.005	2,117
High School	0.07	1.33	1.12	0.01	0.10	—	0.10	0.10	—	0.10	—	1,591	1,591	0.14	< 0.005	1,596
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	1.28	22.4	12.9	0.14	1.77	—	1.77	1.77	—	1.77	—	27,806	27,806	2.46	0.05	27,883
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.13	2.30	0.98	0.01	0.19	—	0.19	0.19	—	0.19	—	2,644	2,644	0.23	< 0.005	2,651
Hotel	0.01	0.23	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	254	254	0.02	< 0.005	254
Strip Mall	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	30.2	30.2	< 0.005	< 0.005	30.3
Regional Shopping Center	0.03	0.46	0.39	< 0.005	0.03	—	0.03	0.03	—	0.03	—	498	498	0.04	< 0.005	500
General Office Building	0.03	0.52	0.44	< 0.005	0.04	—	0.04	0.04	—	0.04	—	565	565	0.05	< 0.005	566
Retirement Community	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	350	350	0.03	< 0.005	351
High School	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	263	263	0.02	< 0.005	264
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.23	4.09	2.36	0.03	0.32	—	0.32	0.32	—	0.32	—	4,604	4,604	0.41	0.01	4,616

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	4.03	68.9	29.3	0.44	5.57	—	5.57	5.57	—	5.57	0.00	88,928	88,928	1.74	0.18	89,024
Consumer Products	167	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	15.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	41.9	3.47	387	0.02	0.32	—	0.32	0.24	—	0.24	—	1,186	1,186	0.05	0.01	1,190
Total	228	72.4	416	0.46	5.89	—	5.89	5.81	—	5.81	0.00	90,114	90,114	1.79	0.19	90,214
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	4.03	68.9	29.3	0.44	5.57	—	5.57	5.57	—	5.57	0.00	88,928	88,928	1.74	0.18	89,024
Consumer Products	167	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	15.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	186	68.9	29.3	0.44	5.57	—	5.57	5.57	—	5.57	0.00	88,928	88,928	1.74	0.18	89,024
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.05	0.86	0.37	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,008	1,008	0.02	< 0.005	1,010

Consumer Products	30.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.23	0.43	48.4	< 0.005	0.04	—	0.04	0.03	—	0.03	—	135	135	0.01	< 0.005	135
Total	38.5	1.30	48.7	0.01	0.11	—	0.11	0.10	—	0.10	0.00	1,143	1,143	0.03	< 0.005	1,145

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	323	1,670	1,993	33.2	0.80	3,060
Hotel	—	—	—	—	—	—	—	—	—	—	26.7	138	165	2.75	0.07	254
Strip Mall	—	—	—	—	—	—	—	—	—	—	13.5	70.0	83.5	1.39	0.03	128
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	223	1,152	1,375	22.9	0.55	2,112
General Office Building	—	—	—	—	—	—	—	—	—	—	143	741	884	14.7	0.35	1,357
Retirement Community	—	—	—	—	—	—	—	—	—	—	29.1	150	179	2.99	0.07	276

High School	—	—	—	—	—	—	—	—	—	—	15.1	78.0	93.0	1.55	0.04	143
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	773	4,000	4,773	79.5	1.91	7,329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	323	1,670	1,993	33.2	0.80	3,060
Hotel	—	—	—	—	—	—	—	—	—	—	26.7	138	165	2.75	0.07	254
Strip Mall	—	—	—	—	—	—	—	—	—	—	13.5	70.0	83.5	1.39	0.03	128
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	223	1,152	1,375	22.9	0.55	2,112
General Office Building	—	—	—	—	—	—	—	—	—	—	143	741	884	14.7	0.35	1,357
Retirement Community	—	—	—	—	—	—	—	—	—	—	29.1	150	179	2.99	0.07	276
High School	—	—	—	—	—	—	—	—	—	—	15.1	78.0	93.0	1.55	0.04	143
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	773	4,000	4,773	79.5	1.91	7,329
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	53.4	277	330	5.49	0.13	507
Hotel	—	—	—	—	—	—	—	—	—	—	4.43	22.9	27.3	0.46	0.01	42.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.24	11.6	13.8	0.23	0.01	21.2

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	36.8	191	228	3.79	0.09	350
General Office Building	—	—	—	—	—	—	—	—	—	—	23.7	123	146	2.44	0.06	225
Retirement Community	—	—	—	—	—	—	—	—	—	—	4.81	24.9	29.7	0.49	0.01	45.6
High School	—	—	—	—	—	—	—	—	—	—	2.49	12.9	15.4	0.26	0.01	23.7
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	128	662	790	13.2	0.32	1,213

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	1,788	0.00	1,788	179	0.00	6,255
Hotel	—	—	—	—	—	—	—	—	—	—	162	0.00	162	16.2	0.00	568
Strip Mall	—	—	—	—	—	—	—	—	—	—	53.9	0.00	53.9	5.38	0.00	188
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	887	0.00	887	88.7	0.00	3,105

General Office Building	—	—	—	—	—	—	—	—	—	—	211	0.00	211	21.0	0.00	737
Retirement Community	—	—	—	—	—	—	—	—	—	—	593	0.00	593	59.2	0.00	2,073
High School	—	—	—	—	—	—	—	—	—	—	175	0.00	175	17.5	0.00	614
City Park	—	—	—	—	—	—	—	—	—	—	6.30	0.00	6.30	0.63	0.00	22.1
Total	—	—	—	—	—	—	—	—	—	—	3,876	0.00	3,876	387	0.00	13,561
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	1,788	0.00	1,788	179	0.00	6,255
Hotel	—	—	—	—	—	—	—	—	—	—	162	0.00	162	16.2	0.00	568
Strip Mall	—	—	—	—	—	—	—	—	—	—	53.9	0.00	53.9	5.38	0.00	188
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	887	0.00	887	88.7	0.00	3,105
General Office Building	—	—	—	—	—	—	—	—	—	—	211	0.00	211	21.0	0.00	737
Retirement Community	—	—	—	—	—	—	—	—	—	—	593	0.00	593	59.2	0.00	2,073
High School	—	—	—	—	—	—	—	—	—	—	175	0.00	175	17.5	0.00	614
City Park	—	—	—	—	—	—	—	—	—	—	6.30	0.00	6.30	0.63	0.00	22.1
Total	—	—	—	—	—	—	—	—	—	—	3,876	0.00	3,876	387	0.00	13,561
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartment Mid Rise	—	—	—	—	—	—	—	—	—	—	296	0.00	296	29.6	0.00	1,036
Hotel	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.69	0.00	94.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	8.92	0.00	8.92	0.89	0.00	31.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	147	0.00	147	14.7	0.00	514
General Office Building	—	—	—	—	—	—	—	—	—	—	34.9	0.00	34.9	3.48	0.00	122
Retirement Community	—	—	—	—	—	—	—	—	—	—	98.1	0.00	98.1	9.80	0.00	343
High School	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.90	0.00	102
City Park	—	—	—	—	—	—	—	—	—	—	1.04	0.00	1.04	0.10	0.00	3.65
Total	—	—	—	—	—	—	—	—	—	—	642	0.00	642	64.1	0.00	2,245

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.8
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	259
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.53
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.02
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.7
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	312
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.8
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	259
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.53
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.02
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.7
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	312
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.11
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	42.9
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.17
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.10
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/6/2025	8/15/2025	5.00	160	—
Grading	Grading	8/18/2025	3/26/2027	5.00	420	—
Building Construction	Building Construction	3/29/2027	5/1/2043	5.00	4,200	—
Paving	Paving	5/4/2043	6/24/2044	5.00	300	—
Architectural Coating	Architectural Coating	12/22/2036	1/6/2045	5.00	2,100	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 4 Interim	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 4 Interim	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Interim	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Interim	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	13.2	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.75	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	13.2	LDA,LDT1,LDT2
Grading	Vendor	—	7.75	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	4,356	13.2	LDA,LDT1,LDT2
Building Construction	Vendor	930	7.75	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	13.2	LDA,LDT1,LDT2
Paving	Vendor	—	7.75	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	871	13.2	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.75	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	10,745,784	3,581,928	3,728,336	1,242,779	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	240	0.00	—
Grading	—	—	1,260	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Apartments Mid Rise	—	0%
Hotel	0.00	0%
Strip Mall	0.00	0%
Regional Shopping Center	0.00	0%
General Office Building	0.00	0%
Retirement Community	—	0%
High School	0.00	0%
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005
2029	0.00	532	0.03	< 0.005
2030	0.00	532	0.03	< 0.005
2031	0.00	532	0.03	< 0.005
2032	0.00	532	0.03	< 0.005
2033	0.00	532	0.03	< 0.005
2034	0.00	532	0.03	< 0.005
2035	0.00	532	0.03	< 0.005
2036	0.00	532	0.03	< 0.005
2037	0.00	532	0.03	< 0.005
2038	0.00	532	0.03	< 0.005
2039	0.00	532	0.03	< 0.005

2040	0.00	532	0.03	< 0.005
2041	0.00	532	0.03	< 0.005
2042	0.00	532	0.03	< 0.005
2043	0.00	532	0.03	< 0.005
2044	0.00	532	0.03	< 0.005
2045	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	20,366	20,366	20,366	7,433,751	126,931	126,931	126,931	46,329,640
Hotel	4,395	4,395	4,395	1,603,993	37,121	37,121	37,121	13,549,142
Strip Mall	5,184	5,184	5,184	1,892,029	43,787	43,787	43,787	15,982,222
Regional Shopping Center	58,035	58,035	58,035	21,182,779	220,461	246,456	246,456	83,179,092
General Office Building	4,553	4,553	4,553	1,661,772	38,458	38,458	38,458	14,037,213
Retirement Community	1,741	1,741	17,412	1,452,692	10,852	10,852	108,520	9,053,664
High School	3,461	3,461	3,461	1,263,250	29,235	29,235	29,235	10,670,847
City Park	2,876	2,876	2,876	1,049,886	24,297	24,297	24,297	8,868,529

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)

Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	3813
Propane Fireplaces	0
Electric Fireplaces	224
No Fireplaces	449
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Retirement Community	—
Wood Fireplaces	0
Gas Fireplaces	343
Propane Fireplaces	0
Electric Fireplaces	20
No Fireplaces	40
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
10745784	3,581,928	3,728,336	1,242,779	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	16,444,932	532	0.0330	0.0040	49,825,297
Hotel	2,317,357	532	0.0330	0.0040	4,781,154
Strip Mall	934,994	532	0.0330	0.0040	569,957
Regional Shopping Center	15,400,786	532	0.0330	0.0040	9,388,067
General Office Building	7,484,520	532	0.0330	0.0040	10,645,516
Retirement Community	1,549,358	532	0.0330	0.0040	6,587,493
High School	1,480,197	532	0.0330	0.0040	4,965,248
City Park	0.00	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	168,340,066	0.00
Hotel	13,951,724	0.00
Strip Mall	7,051,704	0.00
Regional Shopping Center	116,152,380	0.00
General Office Building	74,648,174	0.00

Retirement Community	15,160,363	0.00
High School	7,858,449	0.00
City Park	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	3,317	—
Hotel	301	—
Strip Mall	100.0	—
Regional Shopping Center	1,646	—
General Office Building	391	—
Retirement Community	1,099	—
High School	326	—
City Park	11.7	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00

Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Retirement Community	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Retirement Community	Household refrigerators and/or freezers	R-134a	1,430	0.22	0.60	0.00	1.00
High School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
High School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
High School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
High School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Construction: Off-Road Equipment	Assuming the use of Tier 4 construction equipment consistent with 2017 SEIR MM AQ-5.
Operations: Vehicle Data	The Approved Project would generate approximately 100,611 average daily trips.
Operations: Hearths	Assuming that the Approved Uses would not include any wood burning fireplaces or wood stoves.
Land Use	The Approved Uses include 4,486 multi-family residential units, 550 hotel rooms (165,600 sq ft), 95,200 sq ft of neighborhood commercial uses, 1,568,090 sq ft of community commercial uses, 420,000 sq ft of office uses, 404 continuing care/senior housing units (1,000,000 sq ft), a high school with 1,784 students, 91 acres of passive park space, and 45 acres of active park space. Using CalEEMod defaults for lot acreages.
Construction: Construction Phases	The project buildout year is assumed to be 2045. Additionally, this analysis assumes that project construction activities could occur anytime beginning January 2025. The project would not include any demolition activities and architectural coating activities would overlap with building construction.

APPENDIX B

DETAILED ENERGY CALCULATIONS

Construction Off-Road Equipment - Modified Project											
Phase	**Off-Road Equipment Type**	**Amount**	**Usage Hour/Day**	**Total Usage Days**	**Total Usage Hours/Equipment**	**Horsepower**	**Load Factor**	**Total Usage Hours/ Equipment**	**Horsepower-Hour**	**Fuel Usage (gallons)**	
Site Preparation	Rubber Tired Dozers	3	8	160	3840	367	0.4	3840	563712	28862.0544	
	Tractors/Loaders/Backhoes	4	8	160	5120	84	0.37	5120	159129.6	8147.43552	
Grading	Excavators	2	8	420	6720	36	0.38	6720	91929.6	4706.79552	
	Graders	1	8	420	3360	148	0.41	3360	203884.8	10438.90176	
	Rubber Tired Dozers	1	8	420	3360	367	0.4	3360	493248	25254.2976	
	Scrapers	2	8	420	6720	423	0.48	6720	1364428.8	69858.75456	
	Tractors/Loaders/Backhoes	2	8	420	6720	84	0.37	6720	208857.6	10693.50912	
Building Construction	Cranes	1	7	4200	29400	367	0.29	29400	3129042	160206.9504	
	Forklifts	3	8	4200	100800	82	0.2	100800	1653120	84639.744	
	Generator Sets	1	8	4200	33600	14	0.74	33600	348096	17822.5152	
	Tractors/Loaders/Backhoes	3	7	4200	88200	84	0.37	88200	2741256	140352.3072	
	Welders	1	8	4200	33600	46	0.45	33600	695520	35610.624	
Paving	Pavers	2	8	300	4800	81	0.42	4800	163296	8360.7552	
	Paving Equipment	2	8	300	4800	89	0.36	4800	153792	7874.1504	
	Rollers	2	8	300	4800	36	0.38	4800	65664	3361.9968	
Architectural Coating	Air Compressors	1	6	2100	12600	37	0.48	12600	223776	11457.3312	
									Total	**627648.1229**	Diesel

Construction Truck and Construction Worker Vehicle Fuel Efficiency				
		EMFAC 2021 Outputs		
Vehicle Type	Vehicle Class	Fuel Consumption (1,000 gallons/day)	VMT (miles/ day)	Fuel Efficency (miles/gallon)
Construction Truck	MHDT	129.3	1,155,908.7	8.9
	HHDT	202.3	1,220,548.3	6.0
	HHDT/MHDT	-	-	7.5
Construction Worker Vehicle	LDA	1408.4	42,285,386.1	30.0
	LDT1	139.0	3,495,530.4	25.2
	LDT2	872.9	21,321,177.5	24.4
	Worker Mix	-	-	27.4

Notes:

[1] For construction trucks assumes 50 percent HHDT and 50 percent MHDT vehicles, consistent with assumptions in CalEEMod for hauling trucks. For construction worker vehicles assumes 50 percent LDA, 25 percent LDT1, and 25 percent LDT2 vehicles, consistent with assumptions in CalEEMod for worker vehicles.

[2] EMFAC2021 was run for Orange County for the construction year 2024. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Vehicle Fuel Use - Diesel Vehicles - Modified Project						
Phase	Trip Type	Total Trips	Trip Length (miles)	Total VMT	Diesel Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Building Construction	Vendor	13,347,600.0	7.8	103,443,900.0	7.5	13,817,298.7
					Total	**13,817,298.7**

Diesel

[1] Assumes 100 percent HHDT vehicles for haul trucks and 50 percent HHDT/50 percent MHDT vehicles for MHDT, consistent with assumptions in CalEEMod.

[2] EMFAC2021 was run for Orange County for the construction year 2024. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Worker Vehicle Fuel Use - Gasoline Vehicles - Modified Project							
Phase	Total One-Way Trips/Day	Total Days	Total Trips	Trip Length (miles)	Total VMT	Gasoline Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Site Preparation	18	160	5,760	13.19	75,974	27.4	2,772.2
Grading	20	420	16,800	13.19	221,592	27.4	8,085.5
Building Construction	8082	4,200	67,888,800	13.19	895,453,272	27.4	32,673,541.4
Paving	15	300	9,000	13.19	118,710	27.4	4,331.5
Architectural Coating	1616	2,100	6,787,200	13.19	89,523,168	27.4	3,266,545.6
					Total	**35,955,276.2**	

Gas

Total Construction Gasoline Usage	35,955,276.2
Total Construction Diesel Usage	14,444,946.8

Modified Project Operational Trips			
Vehicle Class	CalEEMod	Total Project Trips	Total Trips per Vehicle Class
LDA	47.50%	116,289	55,237.3
LDT1	3.32%	116,289	3,860.8
LDT2	24.84%	116,289	28,886.2
MDV	14.91%	116,289	17,338.7
LHD1	3.12%	116,289	3,628.2
LHD2	0.89%	116,289	1,035.0
MHD	1.74%	116,289	2,023.4
HHD	0.77%	116,289	895.4
OBUS	0.06%	116,289	69.8
UBUS	0.05%	116,289	58.1
MCY	2.46%	116,289	2,860.7
SBUS	0.09%	116,289	104.7
MH	0.27%	116,289	314.0

Modified Project Operational Trips – Fuel Efficiency						
Fuel	Vehicle Class	EMFAC2021 Outputs1				
		Fleet Mix (%)2	Fuel Consumption (1,000 gallons/day)	VMT (miles/day)	Fuel Efficiency3 (miles/gallon)	
Gas	LDA	52%	1408.4	42,285,386.1	30.0	15.5
	LDT1	4%	139.0	3,495,530.4	25.2	1.1
	LDT2	26%	872.9	21,321,177.5	24.4	6.4
	MDV	15%	635.4	12,620,485.4	19.9	3.1
	LHD1	2%	118.3	1,661,882.0	14.0	0.3
	MCY	0%	7.6	321,576.6	42.2	0.2
	MH	0%	12.0	58,495.6	4.9	0.0
	Fleet Mix	–	–	–	26.5	26.5
Diesel	LHD2	14%	22.4	391,527.7	17.5	2.5
	MHDT	42%	129.3	1,155,908.7	8.9	3.7
	HHDT	44%	202.3	1,220,548.3	6.0	2.7
	Fleet Mix	–	–	–	8.9	8.9

Notes:

[1] EMFAC2021 was run for Orange County for the year 2024. Data was aggregated over all vehicle model years and speed bins.

[2] Fleet mix is based on assumptions made in CalEEMod for the proposed project.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Modified Project Operational Trips – Fuel Usage						
Land Use	Total Annual VMT2 (miles/year)	Fuel Type	Portion of Fleet3 (%)	VMT by Fuel Type (miles/year)	Fleet Mix Efficiency4 (miles/gallon)	Fuel Usage (gallons/ year)
Single Family Housing	17,354,177.00	Gas	96.6%	16,757,193.3	26.5	632,530.6
		Diesel	3.4%	590,042.0	8.9	66,577.0
Apartments Mid Rise	89,302,808.00	Gas	96.6%	86,230,791.4	26.5	3,254,937.5
		Diesel	3.4%	3,036,295.5	8.9	342,598.3
Hotel	5,936,988.00	Gas	96.6%	5,732,755.6	26.5	216,393.2
		Diesel	3.4%	201,857.6	8.9	22,776.5
Regional Shopping Center	57,563,736.00	Gas	96.6%	55,583,543.5	26.5	2,098,101.6
		Diesel	3.4%	1,957,167.0	8.9	220,835.6
General Office Building	54,166,933.00	Gas	96.6%	52,303,590.5	26.5	1,974,293.8
		Diesel	3.4%	1,841,675.7	8.9	207,804.2
Retirement Community	7,755,281.00	Gas	96.6%	7,488,499.3	26.5	282,667.0
		Diesel	3.4%	263,679.6	8.9	29,752.1
High School	10,670,847.00	Gas	96.6%	10,303,769.9	26.5	388,934.5
		Diesel	3.4%	362,808.8	8.9	40,937.3
City Park	8,868,529.00	Gas	96.6%	8,563,451.6	26.5	323,243.0
		Diesel	3.4%	301,530.0	8.9	34,022.9
					Total Gasoline/year	**9,171,101.1**
					Total Diesel/year	**965,303.8**

Notes:

[1] Calculated for year 2024 only. Future years will likely use less fuel due to more efficient cars.

[2] Total VMT is based on project's trip generation and trip lengths.

[3] Fleet distribution is based on EMFAC2021 output and CalEEMod assumptions.

[4] Fuel efficiency is based on fuel consumption and VMT data from EMFAC2021 for Orange County and total VMT.

Modified Project Electricity Usage	
Electricity by Land Use	**kWh/year**
Single Family Housing	5,578,172
Apartments Mid Rise	31,698,467
Hotel	1,007,547
Regional Shopping Center	10,658,049
General Office Building	28,881,338
Retirement Community	3,033,521
Hotel	1,480,197
City Park	0
Total	**82,337,291**

Modified Project Natural Gas Usage			
Natural Gas by Land Use	**kBTU/year**	**BTU/year**	**therms/year**
Single Family Housing	31,013,295	31,013,295,000	310,195
Apartments Mid Rise	96,040,871	96,040,871,000	960,601
Hotel	2,078,762	2,078,762,000	20,792
Regional Shopping Center	6,496,972	6,496,972,000	64,983
General Office Building	41,079,020	41,079,020,000	410,872
Retirement Community	12,897,789	12,897,789,000	129,004
Hotel	4,965,298	4,965,298,000	49,663
City Park	-	-	-
Total	**194,572,007**	**194,572,007,000**	**1,946,109**

Construction Off-Road Equipment - Approved Project										
Phase	**Off-Road Equipment Type**	**Amount**	**Usage Hour/Day**	**Total Usage Days**	**Total Usage Hours/Equipment**	**Horsepower**	**Load Factor**	**Total Usage Hours/ Equipment**	**Horsepower-Hour**	**Fuel Usage (gallons)**
Site Preparation	Rubber Tired Dozers	3	8	160	3840	367	0.4	3840	563712	28862.0544
	Tractors/Loaders/Backhoes	4	8	160	5120	84	0.37	5120	159129.6	8147.43552
Grading	Excavators	2	8	420	6720	36	0.38	6720	91929.6	4706.79552
	Graders	1	8	420	3360	148	0.41	3360	203884.8	10438.90176
	Rubber Tired Dozers	1	8	420	3360	367	0.4	3360	493248	25254.2976
	Scrapers	2	8	420	6720	423	0.48	6720	1364428.8	69858.75456
	Tractors/Loaders/Backhoes	2	8	420	6720	84	0.37	6720	208857.6	10693.50912
Building Construction	Cranes	1	7	4200	29400	367	0.29	29400	3129042	160206.9504
	Forklifts	3	8	4200	100800	82	0.2	100800	1653120	84639.744
	Generator Sets	1	8	4200	33600	14	0.74	33600	348096	17822.5152
	Tractors/Loaders/Backhoes	3	7	4200	88200	84	0.37	88200	2741256	140352.3072
	Welders	1	8	4200	33600	46	0.45	33600	695520	35610.624
Paving	Pavers	2	8	300	4800	81	0.42	4800	163296	8360.7552
	Paving Equipment	2	8	300	4800	89	0.36	4800	153792	7874.1504
	Rollers	2	8	300	4800	36	0.38	4800	65664	3361.9968
Architectural Coating	Air Compressors	1	6	2100	12600	37	0.48	12600	223776	11457.3312
									Total	**627648.1229** Diesel

Construction Truck and Construction Worker Vehicle Fuel Efficiency				
		EMFAC 2021 Outputs		
Vehicle Type	Vehicle Class	Fuel Consumption (1,000 gallons/day)	VMT (miles/ day)	Fuel Efficency (miles/gallon)
Construction Truck	MHDT	129.3	1,155,908.7	8.9
	HHDT	202.3	1,220,548.3	6.0
	HHDT/MHDT	-	-	7.5
Construction Worker Vehicle	LDA	1408.4	42,285,386.1	30.0
	LDT1	139.0	3,495,530.4	25.2
	LDT2	872.9	21,321,177.5	24.4
	Worker Mix	-	-	27.4

Notes:

[1] For construction trucks assumes 50 percent HHDT and 50 percent MHDT vehicles, consistent with assumptions in CalEEMod for hauling trucks. For construction worker vehicles assumes 50 percent LDA, 25 percent LDT1, and 25 percent LDT2 vehicles, consistent with assumptions in CalEEMod for worker vehicles.

[2] EMFAC2021 was run for Orange County for the construction year 2024. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Vehicle Fuel Use - Diesel Vehicles - Approved Project						
Phase	Trip Type	Total Trips	Trip Length (miles)	Total VMT	Diesel Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Building Construction	Vendor	7,812,000.0	10.2	79,682,400.0	7.5	10,643,406.9
					Total	**10,643,406.9** Diesel

[1] Assumes 100 percent HHDT vehicles for haul trucks and 50 percent HHDT/50 percent MHDT vehicles for MHDT, consistent with assumptions in CalEEMod.

[2] EMFAC2021 was run for Orange County for the construction year 2024. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Worker Vehicle Fuel Use - Gasoline Vehicles - Approved Project							
Phase	Total One-Way Trips/Day	Total Days	Total Trips	Trip Length (miles)	Total VMT	Gasoline Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Site Preparation	18	160	5,760	13.19	75,974	27.4	2,772.2
Grading	20	420	16,800	13.19	221,592	27.4	8,085.5
Building Construction	4356	4,200	36,590,400	13.19	482,627,376	27.4	17,610,238.4
Paving	15	300	9,000	13.19	118,710	27.4	4,331.5
Architectural Coating	871	2,100	3,658,200	13.19	48,251,658	27.4	1,760,619.6
					Total	**19,386,047.1**	Gas

Total Construction Gasoline Usage	19,386,047.1
Total Construction Diesel Usage	11,271,055.1

Approved Project Operational Trips			
Vehicle Class	CalEEMod	Total Project Trips	Total Trips per Vehicle Class
LDA	47.50%	100,611	47,790.2
LDT1	3.32%	100,611	3,340.3
LDT2	24.84%	100,611	24,991.8
MDV	14.91%	100,611	15,001.1
LHD1	3.12%	100,611	3,139.1
LHD2	0.89%	100,611	895.4
MHD	1.74%	100,611	1,750.6
HHD	0.77%	100,611	774.7
OBUS	0.06%	100,611	60.4
UBUS	0.05%	100,611	50.3
MCY	2.46%	100,611	2,475.0
SBUS	0.09%	100,611	90.5
MH	0.27%	100,611	271.6

Approved Project Operational Trips – Fuel Efficiency						
Fuel	Vehicle Class	EMFAC2021 Outputs1				
		Fleet Mix (%)2	Fuel Consumption (1,000 gallons/day)	VMT (miles/day)	Fuel Efficiency3 (miles/gallon)	
Gas	LDA	52%	1408.4	42,285,386.1	30.0	15.5
	LDT1	4%	139.0	3,495,530.4	25.2	1.1
	LDT2	26%	872.9	21,321,177.5	24.4	6.4
	MDV	15%	635.4	12,620,485.4	19.9	3.1
	LHD1	2%	118.3	1,661,882.0	14.0	0.3
	MCY	0%	7.6	321,576.6	42.2	0.2
	MH	0%	12.0	58,495.6	4.9	0.0
	Fleet Mix	–	–	–	26.5	26.5
Diesel	LHD2	14%	22.4	391,527.7	17.5	2.5
	MHDT	42%	129.3	1,155,908.7	8.9	3.7
	HHDT	44%	202.3	1,220,548.3	6.0	2.7
	Fleet Mix	–	–	–	8.9	8.9

Notes:

[1] EMFAC2021 was run for Orange County for the year 2024. Data was aggregated over all vehicle model years and speed bins.

[2] Fleet mix is based on assumptions made in CalEEMod for the proposed project.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Approved Project Operational Trips – Fuel Usage						
Land Use	Total Annual VMT2 (miles/year)	Fuel Type	Portion of Fleet3 (%)	VMT by Fuel Type (miles/year)	Fleet Mix Efficiency4 (miles/gallon)	Fuel Usage (gallons/ year)
Apartments Mid Rise	46,329,640.00	Gas	96.6%	44,735,900.4	26.5	1,688,637.6
		Diesel	3.4%	1,575,207.8	8.9	177,737.5
Hotel	13,549,142.00	Gas	96.6%	13,083,051.5	26.5	493,843.5
		Diesel	3.4%	460,670.8	8.9	51,979.5
Strip Mall	15,982,222.00	Gas	96.6%	15,432,433.6	26.5	582,525.2
		Diesel	3.4%	543,395.5	8.9	61,313.7
Regional Shopping Center	83,179,092.00	Gas	96.6%	80,317,731.2	26.5	3,031,738.3
		Diesel	3.4%	2,828,089.1	8.9	319,105.5
General Office Building	14,037,213.00	Gas	96.6%	13,554,332.9	26.5	511,632.9
		Diesel	3.4%	477,265.2	8.9	53,851.9
Retirement Community	9,053,664.00	Gas	96.6%	8,742,218.0	26.5	329,990.9
		Diesel	3.4%	307,824.6	8.9	34,733.2
High School	10,670,847.00	Gas	96.6%	10,303,769.9	26.5	388,934.5
		Diesel	3.4%	362,808.8	8.9	40,937.3
City Park	8,868,529.00	Gas	96.6%	8,563,451.6	26.5	323,243.0
		Diesel	3.4%	301,530.0	8.9	34,022.9
					Total Gasoline/year	**2,505,724.1**
					Total Diesel/year	**263,739.9**

Notes:

[1] Calculated for year 2024 only. Future years will likely use less fuel due to more efficient cars.

[2] Total VMT is based on project's trip generation and trip lengths.

[3] Fleet distribution is based on EMFAC2021 output and CalEEMod assumptions.

[4] Fuel efficiency is based on fuel consumption and VMT data from EMFAC2021 for Orange County and total VMT.

Approved Project Electricity Usage	
Electricity by Land Use	**kWh/year**
Apartments Mid Rise	16,444,932
Hotel	2,317,357
Strip Mall	934,994
Regional Shopping Center	15,400,786
General Office Building	7,484,520
Retirement Community	1,549,358
High School	1,480,197
City Park	0
Total	**45,612,144**

Approved Project Natural Gas Usage			
Natural Gas by Land Use	**kBTU/year**	**BTU/year**	**therms/year**
Apartments Mid Rise	49,825,297	49,825,297,000	498,353
Hotel	4,781,154	4,781,154,000	47,821
Strip Mall	569,957	569,957,000	5,701
Regional Shopping Center	9,388,067	9,388,067,000	93,899
General Office Building	10,645,516	10,645,516,000	106,476
Retirement Community	6,587,493	6,587,493,000	65,888
High School	4,965,248	4,965,248,000	49,662
City Park	-	-	-
Total	**86,762,732**	**86,762,732,000**	**867,801**

Appendix C
Noise Vibration Impact Analysis

NOISE AND VIBRATION IMPACT ANALYSIS

TUSTIN LEGACY SPECIFIC PLAN AMENDMENT PROJECT

CITY OF TUSTIN, CALIFORNIA

LSA

May 2024

NOISE AND VIBRATION IMPACT ANALYSIS

TUSTIN LEGACY SPECIFIC PLAN AMENDMENT PROJECT

CITY OF TUSTIN, CALIFORNIA

Submitted to:

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May 2024

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LIST OF ABBREVIATIONS AND ACRONYMS

ADT	average daily trips
APNs	Assessor's Parcel Numbers
CalEEMod	California Emissions Estimator Model
CALGreen Code	California Green Building Standards Code
City	City of Tustin
CNEL	Community Noise Equivalent Level
County	County of Orange
dB	decibel
dBA	A-weighted decibel
EPA	United States Environmental Protection Agency
ft	foot/feet
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HE	Housing Element
HVAC	heating, ventilation, and air conditioning
I-5	Interstate 5
in/sec	inches per second
JWA	John Wayne Airport
L_{dn}	day-night average noise level
L_{eq}	equivalent continuous sound level
L_{max}	maximum instantaneous sound level
PAs	Planning Areas
PPV	peak particle velocity
project	Tustin Legacy Specific Plan Amendment Project

RHNA	Regional Housing Needs Assessment
RMS	root-mean-square
SR-55	State Route 55
SR-261	State Route 261
SLA	Surplus Land Act
SPL	sound power level
sq ft	square foot/feet
STC	Sound Transmission Class
TLSP	Tustin Legacy Specific Plan
VdB	vibration velocity decibels

INTRODUCTION

This noise and vibration impact analysis has been prepared to evaluate the potential noise and vibration impacts and reduction measures associated with the Tustin Legacy Specific Plan Amendment Project (project) in Tustin, California. This report is intended to satisfy the City of Tustin (City) requirement for a project-specific noise impact analysis by examining the impacts of the project site and evaluating noise reduction measures that the project may require.

PROJECT LOCATION

The City of Tustin is located in the central portion of Orange County and is surrounded by the cities of Irvine to the south; Santa Ana to the west; Orange and unincorporated Orange County to the north; and unincorporated Orange County to the east. Major freeways and highways within or bordering the City of Tustin are the Interstate 5 (I-5) freeway through the center, State Route 55 (SR-55) to the west, and State Route 261 (SR-261) to the east. The project location is shown in Figure 1.

The Tustin Legacy Specific Plan (TLSP) area encompasses approximately 1,606 acres which includes 1,511 acres in the southern Tustin and 95 acres in the northeastern Irvine. The TLSP area is generally bound by Red Hill Avenue to the west, Edinger Avenue to the north, Harvard Avenue to the east, and Barranca Parkway to the south. The local vicinity and the boundary of the TLSP area are shown in Figure 2.

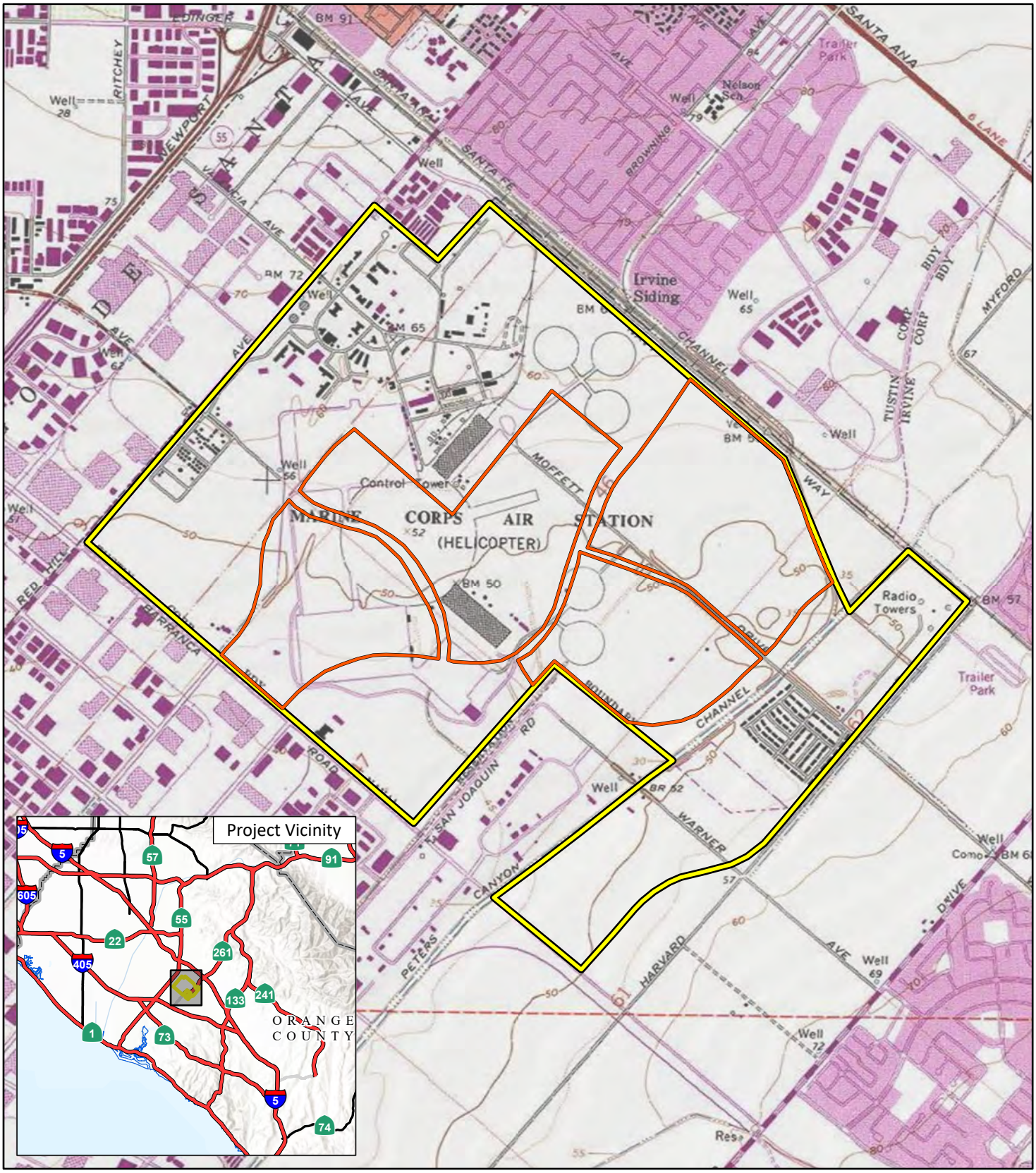
The Modified Project area consists of three properties spread across two geographically defined areas, referred to as Neighborhoods in the TLSP: Neighborhood D and Neighborhood G.

- The portions of Neighborhood D that are identified within the Housing Element (HE) Sites Inventory include 84.73 acres of the total 190 acres of Neighborhood D North and 124 acres of Neighborhood D South. Parcels identified as housing sites within Neighborhood D North (HE Site 1A) included 39.87 acres, and D South (HE Site 1B) included at 44.86 acres. Neighborhood D North is generally bound by Valencia Avenue to the north, Tustin Ranch Road to the east, Warner Avenue to the south, and Armstrong Avenue to the west. Neighborhood D South is generally bound by Warner Avenue to the north, Tustin Ranch Road to the east, Barranca Parkway to the south, and Armstrong Avenue to the west.

- Neighborhood G is in the northeastern portion of the TLSP site, and the housing element inventory allocates approximately 50 acres of the 271 total acres as being available for residential development. Neighborhood G is generally bound by Edinger Avenue to the north, Jamboree Road to the east, Warner Avenue to the south, and Tustin Ranch Road to the west.

The TLSP Land Use Plan divides the TLSP area into a collection of neighborhoods, each with their own characteristics and set of functions to perform within the TLSP area. Housing Element Sites 1A and 1B are located in “Neighborhood D,” and Site 2 is located in “Neighborhood G”.

The TLSP area, including the Modified Project area, have a General Plan land use designation of Tustin Legacy Specific Plan (TLSP) and a zoning designation of SP1-Tustin Legacy.



LSA

TLSP Area

Modified Project Site

FIGURE 1

N

0 1000 2000

FEET

Tustin Legacy Specific Plan Amendment

Project Location

SOURCE: USGS 7.5' Quad - *Tustin (1981)*, CA

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LSA

TLSP Area

Modified Project Site

FIGURE 2

N

0 930 1860

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Tustin Legacy Specific Plan Amendment

Project Site

SOURCE: Google Maps (2023)

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The Land Use Plan for TLSP has been further divided into 13 separate Planning Areas (PA) and numbered sub-planning areas. Neighborhood D includes PAs 8, 13, and 14, and Neighborhood G includes PA 15. The Land Use Plan for TLSP contains ten land use designations, including an overlay designation: Mixed-Use Transit, Mixed-Use Urban, Commercial, Commercial/Business, Residential, Park, Tustin Legacy Park Overlay, Transitional/Emergency Housing, Education Village, and Public Street Right-of-Way. The land use designations have been assigned a PA number. PAs are the basis for the use and development regulations found within the TLSP.

PROJECT DESCRIPTION

The proposed project consists of a Specific Plan Amendment to amend Neighborhoods D South, D North, and G to increase the allowed residential capacity, as shown in Table A, to be consistent with the 2021–2029 Housing Element Update. Changes between the Modified Project (the proposed Specific Plan Amendment) and the Approved Project (the current approved TLSP) are evaluated in this analysis.

The proposed upzoning would add a total of 855 additional residential units to the existing residential capacity of the Modified Project area. The Housing Element Update also included 1,356 buffer units that are intended to make up for any potential units that are not developed on the other Housing Element Update sites. Therefore, a total of 2,211 units have been incorporated into the residential caps of the TLSP Neighborhoods D North, D South, and G. The provision for the density bonus pursuant to the Surplus Land Act (SLA) is appliable to the TLSP area, and therefore, the application of the density bonus has been analyzed through the addition of 2,759 units. Together, the Housing Element Update Regional Housing Needs Allocation (RHNA) units, buffer units, and density bonus units total an additional 4,970 units.

Proposed Specific Plan Amendment

The proposed Specific Plan Amendment (or Modified Project) proposes increased allowed capacity for the future development of residential units within the Modified Project areas, Neighborhood D South, Neighborhood D North, and Neighborhood G, consistent with the approved 2021–2029 Housing Element of the City of Tustin General Plan. Proposed additional capacity would include the housing units allocated the TLSP to accommodate the City's RHNA, buffer units included as part of the Housing Element, and density bonus units available to developers under the SLA. Density bonus is applicable to all undeveloped residential land uses within the TLSP area, including the newly added 6th cycle RHNA units, as well as the remaining buildout capacity of the existing residential land uses within the TLSP area.

Neighborhood D North/Planning Area 8

Neighborhood D (PAs 8, 13, and 14) within the TLSP is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment. According to the approved TLSP, Neighborhood D North is not designated to accommodate any residential.

Table A: Comparison of Approved Project to Modified Project

Land Use	Unit	Neighborhood D South (PAs 13 & 14)		Neighborhood D North (PA 8)		Neighborhood G (PA 15)		Approved Total	Proposed Total	Modified Project - Approved Project
		Approved Project[1]	Modified Project	Approved Project[1]	Modified Project[2]	Approved Project[1]	Modified Project			
Single Family Housing	DU	-	117	-	-	-	692	-	809	809
Multi-Family Housing	DU	1,672	1,655	-	1,911	2,814	2,322	4,486	5,888	1,402
Hotel	SF	165,600	36,000	-	36,000	-	-	165,600	72,000	(93,600)
Neighborhood Commercial	SF	-	-	-	-	95,200	-	95,200	-	(95,200)
Community Commercial	SF	20,400	10,000	1,547,690	1,038,690	-	36,500	1,568,090	1,085,190	(482,900)
Office	SF	420,000	443,000	-	473,000	-	704,700	420,000	1,620,700	1,200,700
Continuing Care - Senior Housing	SF	-	117,000	-	-	1,000,000	354,000	1,000,000	471,000	(529,000)
	DU	-	521	-	-	404	270	404	791	387
High School	STU	-	-	1,784	1,784	-	-	1,784	1,784	-
Park - Legacy Park (Passive)	AC	6	6	54	54	31	31	91.0	91.0	-
Park - Sports Park (Active)	AC	-	-	45	45	-	-	45.0	45.0	-
Total Residential	**DU**	**1,672**	**1,772**	**-**	**1,911**	**2,814**	**3,014**	**4,486**	**6,697**	**2,211**
Total Nonresidential	**SF**	**606,000**	**606,000**	**1,547,690**	**1,547,690**	**1,095,200**	**1,095,200**	**3,248,890**	**3,248,890**	**-**
Density Bonus		-	655	-	956	-	1,148	-	2,759	2,759
Potential Residential Buildout w/ Density Bonus		**1,672**	**2,427**	**-**	**2,867**	**2,814**	**4,162**	**4,486**	**9,456**	**4,970**

Source: EPD Solutions, Inc. (2024).
Note :
[1] Approved Project refers to the 2017 TLSP.
[2] Neighborhood D North includes 1,356 buffer units.
AC = acre
DU = dwelling unit
PA = Planning Area
SF = square feet
STU = students
TLSP = Tustin Legacy Specific Plan

The 39.87-acre portion of Neighborhood D North identified for increased housing capacity within the 2021–2029 Housing Element include Assessor's Parcel Numbers (APNs) 430-381-38, -41, -91, and -95. The Modified Project would add 555 dwelling units to Neighborhood D buildout capacity, consistent with the adopted Housing Element.

Housing units added to the TLSP area to accommodate the City's RHNA are considered shortfall sites subject to the requirements of Government Code Section 65583.2(h). In order to comply with the requirements of Government Code Section 65583.2(h), the City has identified a portion of Neighborhood D North (APNs 430-381-41 and 430-381-91) to be zoned as exclusively residential land use. These parcels would accommodate a minimum of 203 units. Therefore, the project would include, as part of the Specific Plan Amendment, the designation of APNs 430-381-41 and 430-381-91 as exclusively residential land use. The remaining parcels, 430-381-38 and -95, would be anticipated to accommodate 352 dwelling units (555 total units).

In addition to the 555 units required for the City to meet their RHNA shortfall, 1,356 buffer units were allocated to Neighborhood D North. Buffer units were incorporated as contingency in the event that the City becomes unable to meet their RHNA during the 2021–2029 Housing Element period. These units have been incorporated into the new proposed housing capacity under the TLSP Specific Plan Amendment, providing a total residential maximum buildout of 1,911 units (555 units + 1,356 buffer units).

Neighborhood D South/Planning Areas 13 and 14

Neighborhood D South (PAs 13 and14) is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment. According to the approved TLSP, Neighborhood D South is designated to accommodate 1,672 residential units.

The portion of Neighborhood D South identified for increased housing capacity within the 2021–2029 Housing Element include South Brookfield Tract 18197, Lot 2 and Lots 5–13. The 2021–2029 Housing Element added 100 units to Neighborhood D South, increasing total residential capacity of Neighborhood D South from 1,672 to 1,772.

Neighborhood G/Planning Area 15

Neighborhood G (PA 15) within the TLSP is currently designated as Mixed-Use Urban, which is envisioned as an active living, working, shopping, and recreational environment, mixed-use transit-oriented development and residential uses. A maximum of 2,814 dwelling units and 1,095,200 square feet (sq ft) are the identified maximum capacities in Neighborhood G. The Mixed-Use Transit designation provides flexibility for residential, office, commercial retail, and commercial service uses in a vertical or horizontal configuration. This Planning Area also contains a portion of the Tustin Legacy Park Overlay.

The portion of Neighborhood G identified for increased housing capacity within the 2021–2029 Housing Element includes APNs 430-381-27 to -29, 430-391-03, -27, -28, -56, and -59 to -64. The Modified Project would add 200 dwelling units to the Neighborhood G buildout, increasing the capacity from 2,814 to 3,014 residential units.

Nonresidential Uses of TLSP

In addition to the proposed changes above, the TLSP would be amended to reflect updates to nonresidential development by land use type. These changes have been made due to a series of factors, including entitled/built projects, forecasted market conditions, and anticipated future development. Overall, the changes amongst the various nonresidential land uses would result in a balanced condition (see Table A).

Specific Plan Buildout

Individual sites, or neighborhoods, within the TLSP do not have minimum or maximum densities; however, there is a development cap on the number of housing units in each of the neighborhoods.

The current 2017 TLSP (or Approved Project) identifies a total capacity of 6,813 residential units and 9,532,419 sq ft of nonresidential capacity within the TLSP area. The proposed TLSP identifies a total capacity of 9,024 residential units and 9,532,419 sq ft of nonresidential capacity within the TLSP area (see Table A). More specifically, the Approved Project identifies a total of 4,486 residential units and 3,248,890 sq ft of nonresidential capacity within the Modified Project area. The proposed Modified Project identifies a total capacity of 6,697 residential units and 3,249,500 sq ft of nonresidential capacity within the TLSP area.

While the proposed Specific Plan Amendment would increase the residential capacity by 2,211 units, the provision for State density bonus is appliable to the Modified Project site. The proposed allowed residential capacity increase of 2,211 and the potential of 2,759 density bonus units, for a total of 4,970 units, will be analyzed as part of the project.

Changes in residential and nonresidential development capacity between the Approved Project and proposed Modified Project are captured in Table A. Although no development is proposed as part of the project, for analysis purposes, the project buildout year is assumed to be 2045. Additionally, this analysis assumes that project construction activities could occur anytime beginning January 2025. Construction activities would include site preparation, grading, building construction, paving, and architectural coatings.

Buildout of the Approved Project would generate approximately 100,611 average daily trips (ADT)[1] while buildout of the Modified Project would generate approximately 116,289 ADT, resulting in an increase in 15,678 ADT. Future development would be constructed in compliance with the version of the California Title 24 Energy Efficiency Standards (Title 24 energy standards) and the Title 24 California Green Building Standards Code (CALGreen Code) in effect at the time building permit applications are submitted.

[1] EPD Solutions, Inc. 2024. *Tustin Legacy Specific Plan Trip Generation*.

EXISTING LAND USES SURROUNDING THE MODIFIED PROJECT AREA

The project site is surrounded primarily by residential, commercial, and office uses. The areas adjacent to the project site include the following uses:

- **Northwest:** Business commercial, warehousing, The Bowery mixed-use development, and office uses opposite of Red Hill Avenue;
- **Northeast:** Metrolink train tracks/station Como Channel (stormwater), Tustin Meadows & Peppertree Residential Communities, warehousing and office uses opposite Edinger Avenue;
- **Southwest:** Restaurants, retail, office, and storage uses opposite Barranca Parkway;
- **Southeast:** Tustin Field Residential Community, OC Succulents Nursery, Creekside Education Center, parkland, & Columbus Grove Residential Community;
- **South:** Residential, warehousing, and commercial uses.

The closest sensitive receptor to the project site is The Bowery mixed-use development located approximately 140 ft west of the TLSP boundary. Additionally, residences could be within 50 ft of the perimeter of the modified project site.

NOISE AND VIBRATION FUNDAMENTALS

CHARACTERISTICS OF SOUND

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a sound wave, which results in the tone's range from high to low. Loudness is the strength of a sound, and it describes a noisy or quiet environment; it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity is the average rate of sound energy transmitted through a unit area perpendicular to the direction in which the sound waves are traveling. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

MEASUREMENT OF SOUND

Sound intensity is measured with the A-weighted decibel (dBA) scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound, similar to the human ear's de-emphasis of these frequencies. Decibels (dB), unlike the linear scale (e.g., inches or pounds), are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 dB is 10 times more intense than 0 dB, 20 dB is 100 times more intense than 0 dB, and 30 dB is 1,000 times more intense than 0 dB. Thirty decibels (30 dB) represents 1,000 times as much acoustic energy as 0 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the sound's loudness. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound levels dissipate exponentially with distance from their noise sources. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source sound levels decrease 4.5 dB for each doubling of distance in a relatively flat environment with absorptive vegetation.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the

predominant rating scales for human communities in the State of California are the L_{eq} and Community Noise Equivalent Level (CNEL) or the day-night average noise level (L_{dn}) based on A-weighted decibels. CNEL is the time-weighted average noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noises occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the relaxation. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. The City of Tustin uses the CNEL noise scale for long-term traffic noise impact assessment.

Other noise rating scales of importance when assessing the annoyance factor include the maximum instantaneous noise level (L_{max}), which is the highest sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts, which are increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to sound levels higher than 85 dBA. Exposure to high sound levels affects the entire system, with prolonged sound exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of sound exposure above 90 dBA would result in permanent cell damage. When the sound level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of sound is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by a feeling of pain in the ear (i.e., the threshold of pain). A sound level of 160–165 dBA will result in dizziness or a loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less developed areas.

Table B lists definitions of acoustical terms, and Table C shows common sound levels and their sources.

Table B: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of sound measurement that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., the number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted unless reported otherwise.)
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period, respectively.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dBA to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time. Usually a composite of sound from many sources from many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.

Sources: (1) *Technical Noise Supplement* (Caltrans 2013); (2) *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
Caltrans = California Department of Transportation
FTA = Federal Transit Administration

Table C: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	—
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	—
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	—
Near Freeway Auto Traffic	70	Moderately Loud	Reference level
Average Office	60	Quiet	One-half as loud
Suburban Street	55	Quiet	—
Light Traffic; Soft Radio Music in Apartment	50	Quiet	One-quarter as loud
Large Transformer	45	Quiet	—
Average Residence without Stereo Playing	40	Faint	One-eighth as loud
Soft Whisper	30	Faint	—
Rustling Leaves	20	Very Faint	—
Human Breathing	10	Very Faint	Threshold of Hearing
—	0	Very Faint	—

Source: Compiled by LSA (2021).

FUNDAMENTALS OF VIBRATION

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may not be discernible, but without the effects associated with the shaking of a building there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items sitting on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile-driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 ft from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 ft (FTA 2018). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne

vibration from street traffic will not exceed the impact criteria; however, construction of the project could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne noise is not likely to be a problem because noise arriving via the normal airborne path will usually be greater than ground-borne noise.

Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for train-induced ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile-driving to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS is best for characterizing human response to building vibration, and PPV is used to characterize the potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. Vibration velocity level in decibels is defined as

$$L_v = 20 \log_{10} [V/V_{ref}]$$

where "L_v" is the vibration velocity in decibels (VdB), "V" is the RMS velocity amplitude, and "V_{ref}" is the reference velocity amplitude, or 1×10^{-6} inches/second (in/sec) used in the United States.

REGULATORY SETTING

APPLICABLE NOISE STANDARDS

The applicable noise standards governing the project site include the criteria in the City's Noise Element of the General Plan (Noise Element) and the City of Tustin Municipal Code and City of Irvine Municipal Code.

California Code of Regulations

Interior noise levels for residential habitable rooms are regulated by Title 24 of the California Code of Regulations California Noise Insulation Standards. Title 24, Chapter 12, Section 1206.4, of the 2019 California Building Code requires that interior noise levels attributable to exterior sources not exceed 45 CNEL in any habitable room. A habitable room is a room used for living, sleeping, eating, or cooking. Bathrooms, closets, hallways, utility spaces, and similar areas are not considered habitable rooms for this regulation (Title 24 California Code of Regulations, Chapter 12, Section 1206.4).

City of Tustin

Noise Element of the General Plan

The City's General Plan Noise Element (City of Tustin 2012) has established exterior and interior noise standards as shown in Table D. These noise standards apply to approved land uses for which mitigation may be required to achieve the City's noise standards. As shown in Table D, the City has a noise standard of 65 dBA CNEL for exterior habitable areas and a 45 dBA CNEL noise standard for interior habitable areas for residential land uses.

Table D: City of Tustin Interior and Exterior Noise Standards

Land Use	Noise Standards[1]	
	Interior[2,3]	Exterior
Residential: Single-family, multifamily, duplex, mobile home	45 dBA CNEL	65 dBA CNEL[4]
Residential: Transient lodging, hotels, motels, nursing homes, hospitals	45 dBA CNEL	65 dBA CNEL[4]
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting rooms, etc.	45 dBA $L_{eq}(12)$	--
Schools	45 dBA $L_{eq}(12)$	67 dBA $L_{eq}(12)$[5]
General offices, reception, clerical, etc.	50 dBA $L_{eq}(12)$	-
Bank lobby, retail store, restaurant, typing pool, etc.	55 dBA $L_{eq}(12)$	-
Manufacturing, kitchen, warehousing, etc.	65 dBA $L_{eq}(12)$	-
Parks, playgrounds	-	65 dBA CNEL[5]
Golf courses, outdoor spectator sports, amusement parks	-	70 dBA CNEL

Source: Noise Element, Tustin General Plan (City of Tustin 2012).

1 CNEL: Community Noise Equivalent Level. $L_{eq}(12)$: The A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operation).

2 Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements to provide a habitable environment.

3 Indoor environment excluding bathrooms, toilets, closets, and corridors.

4 Outdoor environment limited to rear yard of single-family homes, multifamily patios, and balconies (with a depth of 6 feet or more) and common recreation areas.

5 Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.

dBA = A-weighted decibels

UBC = Uniform Building Code

Municipal Code

Article 4, Chapter 6 of the City's Municipal Code (City of Tustin 2023) establishes the maximum permissible noise level that may intrude into a neighbor's property. The Noise Ordinance establishes noise level standards for various land use categories affected by stationary noise sources. Land use categories in the City are defined by five noise zones, as listed below. Table E provides the City's maximum noise standard based on the noise zone, the location of the noise (exterior/interior), and the time period.

Noise Zone 1: All residential properties
Noise Zone 2: All commercial properties
Noise Zone 3: All industrial properties
Noise Zone 4: All special properties such as hospitals, convalescent homes, public and institutional schools, libraries and churches
Noise Zone 5: All mixed-use properties

Table E: City of Tustin Maximum Noise Level Standards

Noise Zone	Exterior/ Interior	Time Period	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
1	Exterior	7:00 AM to 10:00 PM	55	60	65	70	75
		10:00 PM to 7:00 AM	50	55	60	65	70
	Interior	7:00 AM to 10:00 PM	—	—	55	60	65
		10:00 PM to 7:00 AM	—	—	45	50	55
2	Exterior	Anytime	60	65	70	75	80
3	Exterior	Anytime	70	75	80	85	90
4	Exterior	Anytime	55	60	65	70	75
5	Exterior	Anytime	60	65	70	75	80

Source: Municipal Code (City of Tustin 2023).
Note: It shall be unlawful for any person at any location within the incorporated area of the City of Tustin to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other property to exceed. In the event the alleged offensive noise consists of impact noise, simple tone, speech, music, or any combination thereof, each of the above noise levels shall be reduced by 5 dBA. In the event the ambient noise level exceeds any of the first four noise limit categories, the cumulate period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.
dBA = A-weighted decibels
L_{max} = maximum instantaneous noise level
min/mins = minute/minutes

Article 4, Chapter 6 of the City's Municipal Code limits the erection, demolition, alternation, repair, excavation, grading, paving or construction of any building or site to between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and 9:00 a.m. and 5:00 p.m. on Saturdays. Construction is prohibited on Sundays and City-observed federal holidays. Trucks, vehicles and equipment that are making or are involved with material deliveries, loading or transfer of materials, equipment service, maintenance of any devices or appurtenances to any construction project in Tustin shall not be operated on or adjacent to said sites outside of the approved hours for construction activity.

In addition, construction activities may be permitted outside of those limitations in the case of urgent necessity or upon a finding that such approval will not adversely impact adjacent properties and the health, safety and welfare of the community if a temporary exception is granted in writing

by the Building Official for private property or by the Director of Public Works for public properties or their authorized representatives. All temporary waiver requests shall be made in writing and shall include the specific times, dates, and locations requested and a description of the type of activity that is proposed. In granting a temporary exception, conditions may be imposed on construction activities to protect the health, safety and welfare of the community. Any approval granted may be summarily revoked by the Building Official or Director of Public Works at the sole discretion of each official.

City of Irvine

Municipal Code. Section 6-8-204 of the City's Municipal Code (City of Irvine 2015) establishes the maximum permissible noise level that may intrude into a neighbor's property. The Noise Ordinance (adopted in 1975 and revised in 2015) establishes noise level standards for various land use categories affected by stationary noise sources. Land use categories in the City are defined in four noise zones, as listed below. Table F provides the City's maximum noise standard based on the noise zone, the location of the noise (exterior/interior), and the time period. As shown in Table F, the City's noise standards do not apply to multifamily residence private balconies (City of Irvine 2015).

1. **Noise Zone 1:** All hospitals, libraries, churches, schools, and residential properties
2. **Noise Zone 2:** All professional office and public institutional properties
3. **Noise Zone 3:** All commercial properties, excluding professional office properties
4. **Noise Zone 4:** All industrial properties

Table F: City of Irvine Maximum Noise Level Standards

Noise Zone	Exterior/ Interior	Time Period	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
1	Exterior	7:00 AM to 10:00 PM	55	60	65[1]	70	75
		10:00 PM to 7:00 AM	50	55	60	65[1]	70
	Interior	7:00 AM to 10:00 PM	—	—	55	60	65
		10:00 PM to 7:00 AM	—	—	45	50	55
2	Exterior	Anytime	55	60	65	70	75
	Interior	Anytime	—	—	55	60	65
3	Exterior	Anytime	60	65	70	75	80
	Interior	Anytime	—	—	55	60	65
4	Exterior	Anytime	70	75	80	85	90
	Interior	Anytime	—	—	55	60	65

Source: City of Irvine Municipal Code (City of Irvine 2015).
Note: It shall be unlawful for any person at any location within Irvine to create any noise or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person which causes the noise level, when measured on any property within designated noise zones either within or without Irvine, to exceed the applicable noise standard. Each of the noise standards specified above shall be reduced by 5 dBA for impact, or predominant tone noise or for noises consisting of speech or music. In the event the noise source and the affected property are within different noise zones, the noise standards of the affected property shall apply.
[1] This standard does not apply to multifamily residence private balconies. Multifamily developments with balconies that do not meet the 65 dBA CNEL criterion are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.
City = City of Irvine
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
L_{max} = maximum instantaneous noise level
min/mins = minute/minutes

The City's Municipal Code Noise Ordinance has not established any upper limits for construction noise because construction noise is temporary and will stop after project construction is complete. Section 6-8-205a of the City's Municipal Code Noise Ordinance regulates the timing of construction activities and includes special provisions for sensitive land uses. Construction activities shall occur only between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 9:00 a.m. and 6:00 p.m. on Saturday. No construction shall be permitted outside of these hours or on Sundays and federal holidays, except for Columbus Day, unless a temporary waiver is granted by the Chief Building Official or his/her authorized representative. Trucks, vehicles, and equipment that are making or are involved with material deliveries, loading or transferring materials, equipment service, or maintenance of any devices or appurtenances for or within any construction project in the city shall not be operated or driven on City streets outside of these hours or on Sundays and federal holidays unless the City grants a temporary waiver. Any waiver granted shall take into consideration the potential impact on the community. No construction activity will be permitted outside of these hours except in emergencies, including maintenance work on the City rights-of-way that might be required.

Federal Transit Administration

Because the City does not have construction noise level limits, construction noise was assessed using criteria from the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). Table G shows the FTA's General Assessment Construction Noise Criteria based on the composite noise levels per construction phase.

Table G: General Assessment Construction Noise Criteria

Land Use	Daytime 1-hour L_{eq} (dBA)	Nighttime 1-hour L_{eq} (dBA)
Residential	90	80
Commercial	100	100
Industrial	100	100

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level

APPLICABLE VIBRATION STANDARDS

Federal Transit Administration

Vibration standards included in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* (2018) (FTA Manual) are used in this analysis for ground-borne vibration impacts on human annoyance. The criteria for environmental impact from ground-borne vibration and noise are based on the maximum levels for a single event. Table H provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building.

Table I lists the potential vibration building damage criteria associated with construction activities, as suggested in the FTA Manual. FTA guidelines show that a vibration level of up to 0.5 in/sec in PPV is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For non-engineered timber and masonry buildings, the construction building vibration damage criterion is 0.2 in/sec in PPV.

Table H: Interpretation of Vibration Criteria for Detailed Analysis

Land Use	Max L_v (VdB)[1]	Description of Use
Workshop	90	Vibration that is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration that can be felt. Appropriate for offices and similar areas not as sensitive to vibration.
Residential Day	78	Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20×).
Residential Night and Operating Rooms	72	Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100×) and other equipment of low sensitivity.

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] As measured in 1/3-Octave bands of frequency over the frequency range 8 to 80 Hertz.
FTA = Federal Transit Administration Max = maximum
L_V = velocity in decibels VdB = vibration velocity decibels

Table I: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
FTA = Federal Transit Administration PPV = peak particle velocity
in/sec = inch/inches per second

OVERVIEW OF THE EXISTING NOISE ENVIRONMENT

The primary existing noise sources in the project area are transportation facilities such as Barranca Parkway, Red Hill Avenue, Park Avenue, intermittent train noise, and surrounding commercial and office uses.

AMBIENT NOISE MEASUREMENTS

Long-Term Noise Measurements

Long-term (24-hour) noise level measurements were conducted on February 8 and February 9, 2024, using three (3) Larson Davis Spark 706RC Dosimeters. Table J provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements. As shown in Table J, the calculated CNEL levels range from 69.2 dBA CNEL to 73.2 dBA CNEL. Hourly noise levels at surrounding sensitive uses are as low as 54.3 dBA L_{eq} during nighttime hours and 64.7 dBA L_{eq} during daytime hours. Long-term noise monitoring survey sheets are provided in Appendix A. Figure 3 shows the long-term monitoring locations.

Table J: Long-Term 24-Hour Ambient Noise Monitoring Results

Location		Daytime Noise Levels[1] (dBA L_{eq})	Evening Noise Levels[2] (dBA L_{eq})	Nighttime Noise Levels[3] (dBA L_{eq})	Daily Noise Levels (dBA CNEL)
LT-1	Tustin Legacy Park. Along the western corner of the project site near the Barranca Parkway and Red Hill Avenue intersection, on a light pole approximately 110 ft away from the Red Hill Avenue centerline.	66.1-71.1	65.1-65.7	56.5-64.7	70.2
LT-2	2810 Warner Avenue, Irvine. Located near the western façade of an apartment complex (Park Apartments Irvine), on a tree approximately 120 ft away from the Park Avenue centerline.	65.7-69.4	61.7-63.9	54.3-66.5	69.2
LT-3	117 Liberty Street, Tustin. Near the northern façade of a townhome, on a tree approximately 70 ft away from the rail tracks centerline.	64.7-71.5	65.8-71.3	64.9-67.3	73.2

Source: Compiled by LSA (2024).
Note: Noise measurements were conducted from February 8 and February 9, 2024, starting at 12:00 p.m.
[1] Daytime Noise Levels = noise levels during the hours from 7:00 a.m. to 7:00 p.m.
[2] Evening Noise Levels = noise levels during the hours from 7:00 p.m. to 10:00 p.m.
[3] Nighttime Noise Levels = noise levels during the hours from 10:00 p.m. to 7:00 a.m.
dBA = A-weighted decibels
CNEL = Community Noise Equivalent Level
ft = foot/feet
L_{eq} = equivalent continuous sound level

LSA

TLSP Area

Modified Project Site

Long-term Noise Monitoring Location

FIGURE 3

N

0 975 1950

FEET

SOURCE: Google Maps (2023)

Tustin Legacy Specific Plan Amendment

Noise Monitoring Locations

J:\ESL2201.74\GIS\Pro\Tustin Legacy Specific Plan Amendment\Tustin Legacy Specific Plan Amendment.aprx (6/21/2024)

EXISTING AIRCRAFT NOISE

Aircraft flyovers may be audible on the project site due to aircraft activity in the vicinity. The nearest airport to the project is John Wayne Airport (JWA), a commercial airport 2.1 miles to the southwest. The project site is outside the 60 dBA CNEL noise contour of JWA based on the JWA Airport 2022 Annual Community Noise Equivalent Level Contours (County of Orange 2022). Additionally, there are no helipads or private airstrips within 2 miles from the TLSP area. Due to the distance of the project site from the nearest airport, impacts related to aircraft operations are not further discussed in this analysis.

EXISTING RAIL ACTIVITY NOISE

As shown in Table J, above, the exterior noise level at the LT-3 location, representing the northeastern section of the project site, was recorded at 70.2 dBA CNEL. Once site plans are available, a Final Acoustical Report would be required to confirm any proposed exterior noise sensitive areas would experience noise levels less than 65 dBA CNEL and to identify any noise reduction features to the exterior living areas, if necessary.

PROJECT IMPACTS

SHORT-TERM CONSTRUCTION NOISE IMPACTS

Two types of short-term noise impacts could occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the site for the proposed project would incrementally increase noise levels on access roads leading to the site. Although there would be a relatively high single-event noise-exposure potential causing intermittent noise nuisance (passing trucks at 50 ft would generate up to 84 dBA L_{max}), the effect on longer-term ambient noise levels would be small when compared to existing daily traffic volumes on Jamboree Road, Barranca Parkway, or Red Hill Avenue. The results of the California Emissions Estimator Model (CalEEMod) for the proposed project indicate that during the building construction phase, an additional 12,514 vehicles, consisting of worker and hauling trips, would be added to the roadways adjacent to the project site. Because the existing traffic volume on Jamboree Road, Barranca Parkway, or Red Hill Avenue is considerably more than 12,514, construction-related vehicle trips would not approach existing daily traffic volumes and traffic noise would not increase by 3 dBA CNEL. Because construction-related vehicle trips would not approach existing daily traffic volumes, traffic noise would not increase by 3 dBA CNEL. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, short-term, construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during site preparation, excavation, grading, and building erection on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table K lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 ft between the equipment and a noise receptor, taken from the Federal Highway Administration's (FHWA) *Roadway Construction Noise Model* (FHWA 2006).

In addition to the reference maximum noise level, the usage factor provided in Table K is used to calculate the hourly noise level impact for each piece of equipment based on the following equation:

$$L_{eq}(equip) = E.L. + 10\log(U.F.) - 20\log\left(\frac{D}{50}\right)$$

where: $L_{eq}(equip)$ = L_{eq} at a receiver resulting from the operation of a single piece of equipment over a specified time period.

E.L. = noise emission level of the particular piece of equipment at a reference distance of 50 ft.

U.F. = usage factor that accounts for the fraction of time that the equipment is in use over the specified period of time.

D = distance from the receiver to the piece of equipment.

Table K: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)[1]	Maximum Noise Level (L_{max}) at 50 Feet[2]
Auger Drill Rig	20	84
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Paver	50	77
Pickup Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Trencher	50	80
Welder	40	73

Source: FHWA Roadway Construction Noise Model User's Guide, Table 1 (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] Maximum noise levels were developed based on Specification 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
FHWA = Federal Highway Administration
L_{max} = maximum instantaneous sound level

Each piece of construction equipment operates as an individual point source. Using the following equation, a composite noise level can be calculated when multiple sources of noise operate simultaneously:

$$Leq\ (composite) = 10 * \log_{10}\left(\sum_{1}^{n} 10^{\frac{Ln}{10}}\right)$$

Using the equations from the methodology above, the reference information in Table K, and the construction equipment list provided, the composite noise level of each construction phase was calculated. The project construction composite noise levels at a distance of 50 ft would range from 74 dBA L_{eq} to 88 dBA L_{eq} with the highest noise levels occurring during the site preparation and grading phases.

Once composite noise levels are calculated, reference noise levels can then be adjusted for distance using the following equation:

$$Leq\ (at\ distance\ X) = Leq\ (at\ 50\ feet) - 20 * \log_{10}\left(\frac{X}{50}\right)$$

In general, this equation shows that doubling the distance would decrease noise levels by 6 dBA while halving the distance would increase noise levels by 6 dBA.

Table L shows the nearest sensitive uses to the TLSP area and the modified project site, their distance from the center of construction activities based on a typical development size of 5 acres, and composite noise levels expected during construction. These noise level projections do not take into account intervening topography or barriers. Construction equipment calculations are provided in Appendix B.

Table L: Potential Construction Noise Impacts at Nearest Receptor

Receptor (Location)	Composite Noise Level (dBA L_{eq}) at 50 ft[1]	Distance (ft)	Composite Noise Level (dBA L_{eq})
Residences within the TLSP Area	88	280	73
The Bowery Mixed-use Development (West of TLSP Area)		370	71

Source: Compiled by LSA (2024).

[1] The composite construction noise level represents the site preparation and grading phases which are expected to result in the greatest noise level as compared to other phases.

dBA L_{eq} = average A-weighted hourly noise level

ft = foot/feet

While construction noise will vary, it is expected that composite noise levels during construction at the sensitive uses within the TLSP Area, expected to be within 50 ft of the perimeter of a typical 5 acres site, would reach 73 dBA L_{eq}, while the nearest off-site sensitive uses would reach 71 dBA L_{eq}. These predicted noise levels would only occur when all construction equipment is operating simultaneously; and therefore, are assuming to be rather conservative in nature. While construction-related short-term noise levels have the potential to be higher than existing ambient noise levels in the Modified Project area under existing conditions, the noise impacts would no longer occur once project construction is completed.

As stated above, noise impacts associated with construction activities are regulated by the City's noise ordinance. The proposed project will be required to comply with the construction hours specified in the City's Noise Ordinance, which states that construction activities are allowed between 7:00 a.m. and 6:00 p.m., Monday through Friday and 9:00 a.m. and 5:00 p.m. on Saturdays. Construction is prohibited on Sundays and City-observed federal holidays.

As it relates to off-site uses, construction-related noise impacts would remain below the 90 dBA L_{eq} and 100 dBA L_{eq} 1-hour construction noise level criteria as established by the FTA for residential and commercial land uses, respectively, for the average daily condition as modeled from the center of the project site and therefore would be considered less than significant. Best construction practices

presented at the end of this analysis shall be implemented to minimize noise impacts to surrounding receptors.

SHORT-TERM CONSTRUCTION VIBRATION IMPACTS

This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (in/sec). This is because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best for characterizing potential for damage.

Table M shows the PPV and VdB values at 25 ft from the construction vibration source. As shown in Table M bulldozers and other heavy-tracked construction equipment (expected to be used for this project) generate approximately 0.089 PPV in/sec or 87 VdB of ground-borne vibration when measured at 25 ft, based on the FTA Manual. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project construction boundary (assuming the construction equipment would be used at or near the project setback line).

Table M: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 ft	
	PPV (in/sec)	L_V (VdB)[1]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer[2]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[2] Equipment shown in **bold** is expected to be used on site.
µin/sec = microinches per second
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inch/inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The formulae for vibration transmission are provided below, and Tables N and O below provide a summary of off-site construction vibration levels.

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

As shown in Table G, above, the threshold at which vibration levels would result in annoyance would be 78 VdB for daytime residential uses. As shown in Table H, the FTA guidelines indicate that for a non-engineered timer and masonry building, the construction vibration damage criterion is 0.2 in/sec in PPV.

Table N: Potential Construction Vibration Annoyance Impacts at Nearest Receptor

Receptor (Location)	Reference Vibration Level (VdB) at 25 ft[1]	Distance (ft) [2]	Vibration Level (VdB)
Residences within the TLSP Area	87	280	56
The Bowery Mixed-use Development (West of TLSP Area)		370	52

Source: Compiled by LSA (2024).
[1] The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with the average condition, identified by the distance from the center of construction activities to surrounding uses.
ft = foot/feet
VdB = vibration velocity decibels

Table O: Potential Construction Vibration Damage Impacts at Nearest Receptor

Receptor (Location)	Reference Vibration Level (PPV) at 25 ft[1]	Distance (ft)[2]	Vibration Level (PPV)
Residences within the TLSP Area	0.089	50	0.031
The Bowery Mixed-use Development (West of TLSP Area)		140	0.007

Source: Compiled by LSA (2024).
[1] The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with the peak condition, identified by the distance from the perimeter of construction activities to surrounding structures.
ft = foot/feet
PPV = peak particle velocity

Based on the information provided in Table N, vibration levels are expected to approach 56 VdB at the closest sensitive uses to the project site, which is below the 78 VdB threshold for annoyance.

The closest structures to the project site are the residential uses within the TLSP Area, approximately 50 ft from the limits of construction activity. Based on the information provided in Table O, it is expected that vibration levels generated by dump trucks and other large equipment that would operate near the property line would generate ground-borne vibration levels of up to 0.031 PPV (in/sec) at the closest structures to the project site. This vibration level would not exceed the 0.2 PPV (in/sec) threshold considered safe for non-engineered timber and masonry buildings. All other structures are further away and would experience lower vibration levels. Therefore, vibration impacts would be less than significant. Because construction activities are regulated by the City's Municipal Code, which states that construction, maintenance, or demolition activities are allowed

between the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays and City-observed federal holidays, vibration impacts would not occur during the more sensitive nighttime hours.

LONG-TERM OFF-SITE TRAFFIC NOISE IMPACTS

The guidelines included in the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77 108) were used to evaluate highway traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Table P provides the traffic noise levels for the opening year and future year with and without project scenarios. These noise levels represent the worst-case scenario, which assumes no shielding is provided between the traffic and the location where the noise contours are drawn.

The without and with project scenario traffic volumes were obtained from the Traffic Impact Analysis (EPD Solutions Inc. 2024). Appendix C provides the specific assumptions used in developing these noise levels and model printouts. Table P shows that the increase in project-related traffic noise would be no greater than 0.9 dBA. Noise level increases less than 3 dBA are not perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from project-related traffic on off-site sensitive receptors would be less than significant, and no mitigation measures are required.

LONG-TERM TRAFFIC-RELATED VIBRATION IMPACTS

The proposed project would not generate vibration levels related to on-site operations. In addition, vibration levels generated from project-related traffic on the adjacent roadways are unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Vibration levels generated from project-related traffic on the adjacent roadways would be less than significant, and no mitigation measures are required.

LONG-TERM OFF-SITE STATIONARY NOISE IMPACTS

Adjacent off-site land uses would be potentially exposed to stationary-source noise impacts from sources which include on-site heating, ventilation, and air conditioning (HVAC) equipment, and truck deliveries and loading and unloading activities. It is expected that on-site stationary noise sources would meet the City of Tustin maximum noise level standards as presented previously in Table D.

Once proposed uses are determined and final site plans are available, a site-specific noise study would be required to confirm the noise level exposure from stationary sources to off-site sensitive land uses and to identify any specific mitigation measures necessary to achieve an exterior noise level below the City's noise standards.

Table P: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Walnut Ave. between Tustin Ranch Rd. and Jamboree Rd. SB.	23,157	67.4	23,634	67.5	23,788	67.5	0.0	23,873	67.5	24,028	67.5	0.0
Walnut Ave. between Jamboree Rd. SB. and Jamboree Rd. NB.	16,868	66.0	17,464	66.2	17,504	66.2	0.0	18,104	66.3	18,144	66.3	0.0
Edinger Ave. between Newport Ave. and Del Amo Ave.	24,765	66.4	28,825	67.1	29,432	67.2	0.1	36,539	68.1	37,146	68.2	0.1
Edinger Ave. between Del Amo Ave. and Red Hill Ave.	26,835	66.8	31,409	67.5	32,074	67.6	0.1	40,377	68.6	41,043	68.6	0.0
Edinger Ave. between Red Hill Ave. and Kensington Park Dr.	23,443	66.2	26,573	66.7	27,341	66.9	0.2	31,862	67.5	32,630	67.6	0.1
Edinger Ave. between Kensington Park Dr. and Jamboree Rd. SB.	22,449	66.0	23,968	66.3	24,508	66.4	0.1	27,123	66.8	27,663	66.9	0.1
Von Karman Ave. between Barranca Pkwy. and Alton Pkwy.	26,488	67.4	29,000	67.8	29,643	67.9	0.1	34,285	68.5	34,927	68.6	0.1
Edinger Ave. between Jamboree Rd. NB and Harvard Ave.	25,738	66.6	26,959	66.8	27,125	66.8	0.0	29,092	67.1	29,258	67.2	0.1
Valencia Ave. between Red Hill Ave. and Armstrong Ave.	10,156	63.5	11,327	64.0	11,703	64.1	0.1	13,015	64.6	13,391	64.7	0.1
Valencia Ave. between Armstrong Ave. and Kensington Park Dr.	11,761	64.1	13,252	64.7	13,632	64.8	0.1	15,528	65.4	15,908	65.5	0.1
Valencia Ave. between Kensington Park Dr. and Tustin Ranch Rd.	15,695	65.4	19,245	66.3	19,905	66.4	0.1	24,614	67.4	25,275	67.5	0.1
Moffett Dr. between Tustin Ranch Rd. and Park Ave.	3,238	57.7	6,892	61.0	8,459	61.9	0.9	14,721	64.3	16,288	64.7	0.4
Victory Rd. between Tustin Ranch Rd. and Park Ave.	1,904	56.0	2,078	56.4	2,332	56.9	0.5	2,452	57.1	2,705	57.5	0.4
Victory Rd. between Red Hill Ave. and Armstrong Ave.	691	51.6	4,025	59.2	4,762	60.0	0.8	11,169	63.7	11,906	63.9	0.2
Warner Ave. between Red Hill Ave. and Armstrong Ave.	13,197	64.6	16,687	65.7	18,035	66.0	0.3	22,892	67.0	24,240	67.3	0.3
Warner Ave. between Armstrong Ave. and Legacy Rd.	10,960	63.8	15,231	65.3	16,713	65.7	0.4	23,209	67.1	24,691	67.4	0.3
Warner Ave. between Legacy Rd. and Tustin Ranch Rd.	7,888	62.4	8,459	62.7	8,647	62.8	0.1	9,684	63.3	9,872	63.4	0.1
Warner Ave. between Tustin Ranch Rd. and Park Ave.	16,754	65.7	18,644	66.1	19,506	66.3	0.2	22,694	67.0	23,556	67.2	0.2
Warner Ave. between Park Ave. and Jamboree Rd.	20,527	66.6	21,588	66.8	22,057	66.9	0.1	23,863	67.2	24,331	67.3	0.1
Warner Ave. between Jamboree Rd. and Harvard Ave.	17,318	65.8	17,749	65.9	18,159	66.0	0.1	18,673	66.2	19,082	66.2	0.0

Table P: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Park Ave. between Tustin Ranch Rd. and The District	12,147	64.0	13,361	64.4	13,844	64.6	0.2	14,790	64.9	15,272	65.0	0.1
Barranca Pkwy. between Red Hill Ave. and Aston St.	30,169	66.9	32,224	67.2	32,375	67.2	0.0	35,847	67.7	35,998	67.7	0.0
Barranca Pkwy. between Aston St. and Armstrong Ave.	29,137	66.8	30,226	66.9	30,401	66.9	0.0	31,779	67.1	31,954	67.2	0.1
Barranca Pkwy. between Armstrong Ave. and Von Karman Ave.	30,950	67.0	31,785	67.1	31,926	67.1	0.0	32,795	67.3	32,936	67.3	0.0
Barranca Pkwy. between Von Karman Ave. and The District	28,240	66.6	30,063	66.9	30,124	66.9	0.0	33,189	67.3	33,250	67.3	0.0
Barranca Pkwy. between The District and Jamboree Rd.	34,011	67.4	36,360	67.7	36,799	67.8	0.1	41,395	68.3	41,834	68.3	0.0
Barranca Pkwy. between Jamboree Rd. and Harvard Ave.	23,247	65.8	24,050	65.9	24,126	65.9	0.0	25,772	66.2	25,847	66.2	0.0
Alton Pkwy. between Red Hill Ave. and Von Karman Ave.	13,451	64.2	14,783	64.6	14,861	64.7	0.1	17,538	65.4	17,617	65.4	0.0
Alton Pkwy. between Von Karman Ave. and Jamboree Rd.	14,902	64.7	15,355	64.8	15,360	64.8	0.0	16,327	65.1	16,332	65.1	0.0
Alton Pkwy. between Jamboree Rd. and Harvard Ave.	15,998	65.0	16,666	65.2	16,838	65.2	0.0	17,999	65.5	18,171	65.5	0.0
Red Hill Ave. between Edinger Ave. and Valencia Rd.	21,703	66.3	22,781	66.5	22,965	66.5	0.0	24,358	66.8	24,542	66.8	0.0
Red Hill Ave. between Valencia Rd. and Victory Rd.	23,835	66.7	25,955	67.1	26,753	67.2	0.1	28,946	67.6	29,745	67.7	0.1
Red Hill Ave. between Victory Rd. and Warner Ave.	24,191	66.8	25,374	67.0	25,577	67.0	0.0	26,502	67.2	26,705	67.2	0.0
Red Hill Ave. between Warner Ave. and Carnegie Ave.	23,020	66.6	24,461	66.8	25,014	66.9	0.1	27,098	67.3	27,651	67.4	0.1
Red Hill Ave. between Carnegie Ave. and Barranca Pkwy.	24,300	66.8	25,972	67.1	26,449	67.2	0.1	29,455	67.6	29,933	67.7	0.1
Red Hill Ave. between Barranca Pkwy. and Alton Pkwy.	27,510	67.3	28,434	67.5	28,684	67.5	0.0	30,317	67.8	30,566	67.8	0.0
Armstrong Ave. between Valencia Ave. and Victory Rd.	2,951	58.1	3,836	59.3	3,915	59.4	0.1	5,635	61.0	5,714	61.0	0.0
Armstrong Ave. between Victory Rd. and Warner Ave.	3,210	58.5	4,748	60.2	4,840	60.3	0.1	7,946	62.4	8,037	62.5	0.1
Armstrong Ave. between Warner Ave. and Barranca Pkwy.	4,747	60.2	6,575	61.6	6,783	61.8	0.2	10,493	63.7	10,701	63.7	0.0
Kensington Park Dr. between Edinger Ave. and Valencia Ave.	7,057	61.7	8,497	62.5	8,858	62.7	0.2	10,263	63.3	10,623	63.4	0.1

Table P: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Tustin Ranch Rd. between Walnut Ave. and Valencia Ave.	33,978	68.0	38,619	68.6	40,145	68.7	0.1	46,230	69.4	47,756	69.5	0.1
Legacy Rd. between Warner Ave. and Tustin Ranch Rd.	3,278	58.3	4,733	59.9	5,569	60.6	0.7	6,676	61.4	7,512	61.9	0.5
Tustin Ranch Rd. between Valencia Ave. and Moffett Dr.	30,381	67.5	32,935	67.9	34,089	68.0	0.1	38,311	68.5	39,464	68.7	0.2
Tustin Ranch Rd. between Moffett Dr. and Victory Rd.	28,663	67.3	31,371	67.7	32,783	67.9	0.2	37,076	68.4	38,487	68.6	0.2
Tustin Ranch Rd. between Victory Rd. and Warner Av N.	28,485	67.3	30,770	67.6	31,755	67.7	0.1	35,567	68.2	36,552	68.3	0.1
Tustin Ranch Rd. between Warner Ave. N. and Warner Ave. S.	27,493	67.1	29,169	67.4	29,796	67.5	0.1	32,662	67.8	33,289	67.9	0.1
Tustin Ranch Rd. between Warner Ave. S. and Legacy Rd.	20,813	65.9	21,739	66.1	22,123	66.2	0.1	23,623	66.4	24,008	66.5	0.1
Tustin Ranch Rd. between Legacy Rd. and Barranca Pkwy.	23,676	66.5	26,744	67.0	27,581	67.1	0.1	33,220	67.9	34,057	68.0	0.1
The District between Park Ave. and Barranca Pkwy.	8,936	62.7	9,842	63.1	10,375	63.3	0.2	11,003	63.6	11,536	63.8	0.2
Park Ave. between Moffett Dr. and Victory Rd.	1,017	53.3	2,064	56.3	2,520	57.2	0.9	4,308	59.5	4,764	60.0	0.5
Park Ave. between Victory Rd. and Jamboree Rd.	2,996	57.9	3,819	59.0	4,183	59.4	0.4	5,582	60.6	5,947	60.9	0.3
Park Ave. between Jamboree Rd. and Warner Ave.	8,584	62.5	9,991	63.2	10,338	63.3	0.1	13,007	64.3	13,354	64.4	0.1
Park Ave. between Warner Ave. and The District	9,358	62.9	9,977	63.2	10,242	63.3	0.1	11,304	63.7	11,569	63.8	0.1
Jamboree Rd. between Barranca Pkwy. and Alton Pkwy.	48,449	69.1	49,440	69.2	49,964	69.3	0.1	51,562	69.4	52,087	69.5	0.1
Jamboree Rd. between Walnut Ave. and Edinger Ave.	75,334	71.1	76,477	71.1	76,602	71.1	0.0	78,343	71.2	78,469	71.2	0.0
Jamboree Rd. between Edinger Ave. and Warner Ave.	74,989	71.0	75,560	71.1	75,708	71.1	0.0	76,784	71.1	76,931	71.2	0.1
Jamboree Rd. between Warner Ave. and Barranca Pkwy.	59,053	70.0	59,405	70.0	59,577	70.0	0.0	60,160	70.1	60,331	70.1	0.0
Harvard Ave. between Walnut Ave. and Edinger Ave.	7,335	62.1	8,264	62.6	8,359	62.7	0.1	10,256	63.6	10,350	63.6	0.0
Harvard Ave. between Edinger Ave. and Moffett Dr.	5,656	61.0	6,515	61.6	6,619	61.7	0.1	7,903	62.4	8,006	62.5	0.1
Harvard Ave. between Moffett Dr. and Warner Ave.	11,063	63.9	11,896	64.2	11,970	64.2	0.0	13,227	64.7	13,300	64.7	0.0
Harvard Ave. between Warner Ave. and Barranca Pkwy.	13,193	64.6	13,606	64.8	13,669	64.8	0.0	14,063	64.9	14,126	64.9	0.0

Table P: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Harvard Ave. between Barranca Pkwy. and Alton Pkwy.	16,038	65.5	16,265	65.6	16,312	65.6	0.0	16,344	65.6	16,392	65.6	0.0
Walnut Ave. between Jamboree Rd. NB and Harvard Ave.	18,677	66.4	19,945	66.7	20,011	66.7	0.0	22,076	67.2	22,142	67.2	0.0
Red Hill Ave. between Sycamore Ave. and Edinger Ave.	28,247	67.4	28,695	67.5	28,935	67.6	0.1	29,510	67.6	29,750	67.7	0.1
Edinger Ave. between Auto Mall Dr. and Newport Ave.	36,326	68.1	42,128	68.7	42,702	68.8	0.1	48,296	69.3	48,869	69.4	0.1
SR-55 between Edinger Ave. and Barranca Pkwy.	268,324	83.4	277,669	83.6	277,763	83.6	0.0	294,346	83.8	294,440	83.8	0.0
Newport Ave. between Edinger Ave. and SR-55 NB Ramp	13,871	64.6	18,081	65.8	18,411	65.8	0.0	21,821	66.6	22,152	66.6	0.0
Newport Ave. between SR-55 NB Ramp and Valencia Ave.	10,183	63.3	12,976	64.3	13,805	64.6	0.3	15,145	65.0	15,974	65.2	0.2
Del Amo Ave. between Newport Ave. and Edinger Ave.	5,374	60.5	5,753	60.8	5,812	60.8	0.0	6,412	61.3	6,470	61.3	0.0
Valencia Ave. between Newport Ave. and Red Hill Ave.	7,706	62.0	9,283	62.9	10,141	63.2	0.3	12,663	64.2	13,521	64.5	0.3
Warner Ave. between Grand Ave. and Red Hill Ave.	19,580	66.1	22,860	66.8	23,505	66.9	0.1	27,660	67.6	28,305	67.7	0.1
Dyer Rd. between Red Hill Ave. and Pullman St.	30,625	68.0	32,663	68.3	33,040	68.4	0.1	36,251	68.8	36,627	68.8	0.0
Moffett Dr. between Harvard Ave. and Park Ave.	3,163	57.3	5,965	60.1	7,251	60.9	0.8	11,971	63.1	13,256	63.5	0.4
Jamboree Rd SB Ramp between Park Ave. and Jamboree Rd. SB.	7,276	60.4	7,746	60.6	8,006	60.8	0.2	8,752	61.2	9,012	61.3	0.1
Jamboree Rd NB Ramp between Warner Ave. and Jamboree Rd. NB.	10,198	61.8	10,397	61.9	10,585	62.0	0.1	10,824	62.1	11,012	62.2	0.1

Source: Compiled by LSA (2024).
ADT = average daily traffic
CNEL= Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet
NB = northbound
SB = southbound
SR-55 = State Route 55

LAND USE COMPATIBILITY

The dominant source of noise in the project vicinity is traffic noise from roadways in the vicinity of the project.

EXTERIOR NOISE ASSESSMENT

Based on the monitoring results shown in Table I, the existing measured noise levels at the project site closest to the Metrolink train track is up to 73.2 dBA CNEL. Exterior living areas of residential units, which are either shared spaces, access points to the units, or balconies that are less than 6 ft deep, are not considered as exterior living areas. However, once site plans are available, a Final Acoustical Report, as required by Mitigation Measure N-3 (MM N-3) from the 2017 Subsequent EIR for the Tustin Legacy Specific Plan, described further below, would be required to confirm any proposed exterior noise sensitive areas would experience noise levels less than 65 dBA CNEL and to identify any noise reduction features to the exterior living areas, if necessary.

2017 SEIR MM N-3: For new development within the reuse area, the City of Tustin and City of Irvine, as applicable shall ensure that interior and exterior noise levels do not exceed those prescribed by state requirements and local city ordinances and general plans. Plans demonstrating noise regulation conformity shall be submitted for review and approval prior to building permits being issued to accommodate reuse.

INTERIOR NOISE ASSESSMENT

As discussed above, the California Code of Regulations and the City's Noise Element state that an interior noise level standard of 45 dBA CNEL or less is required for all noise-sensitive rooms. Based on the expected future exterior noise levels closest to the Metro link train tracks approaching 73 dBA CNEL, a minimum noise reduction of 28 dBA would be required.

Based on reference information from transmission loss test reports for various Milgard windows (Milgard 2008), the necessary reduction can be achieved with standard building construction and with standard windows, typically in the Sound Transmission Class (STC) 25–28 range, and interior noise levels of 45 dBA CNEL or less would be achieved.

Once final plans are available to detail the exterior wall construction and a window manufacturer has been chosen, as part of the Final Acoustical Report discussed above, an analysis would be required to confirm the reduction capability of the exterior façades and to identify any specific upgrades necessary to achieve an interior noise level of 45 dBA CNEL or below.

BEST CONSTRUCTION PRACTICES AND DESIGN REQUIREMENTS

In addition to compliance with the City's Municipal Code allowed hours of construction of 7:00 a.m. to 8:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays and City-observed federal holidays, the following best construction practices would further minimize construction noise impacts:

- The project construction contractor shall equip all construction equipment, fixed or mobile, with properly operating and maintained noise mufflers consistent with manufacturer's standards.
- The project construction contractor shall locate staging areas away from off-site sensitive uses during the later phases of project development.
- The project construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site whenever feasible.

REFERENCES

City of Irvine. 2015. Municipal Code.

City of Tustin. 2012. *General Plan Noise Element*.

———. 2023. *Municipal Code*. Website: https://library.municode.com/ca/tustin/codes/code_of_ordinances (accessed April 2024). November 27.

County of Orange. 2022. Community Noise Equivalent Level. Website: https://www.ocair.com/about/administration/access-noise/reports-resources/ (accessed April 2024).

EPD Solutions, Inc. 2024. *Tustin Legacy Specific Plan Traffic Impact Analysis*.

Federal Highway Administration (FHWA). 2006. *Roadway Construction Noise Model User's Guide.* January. Washington, D.C. Website: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf (accessed April 2024).

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. Office of Planning and Environment. Report No. 0123. September.

Milgard. 2008. Various Transmission Loss Reports.

APPENDIX A

NOISE MONITORING SHEETS

Noise Measurement Survey – 24 HR

Project Number: ESL2201.74
Project Name: Tustin Legacy SP

Test Personnel: Kevin Nguyendo
Equipment: Spark 706RC (SN:206)

Site Number: LT-1 Date: 2/8/24

Time: From 12:00 p.m. To 12:00 p.m.

Site Location: Tustin Legacy Park. Along the western corner of the project site near the Barranca Parkway and Red Hill Avenue intersection on a light pole.

Primary Noise Sources: Traffic on Barranca Parkway and Red Hill Avenue.

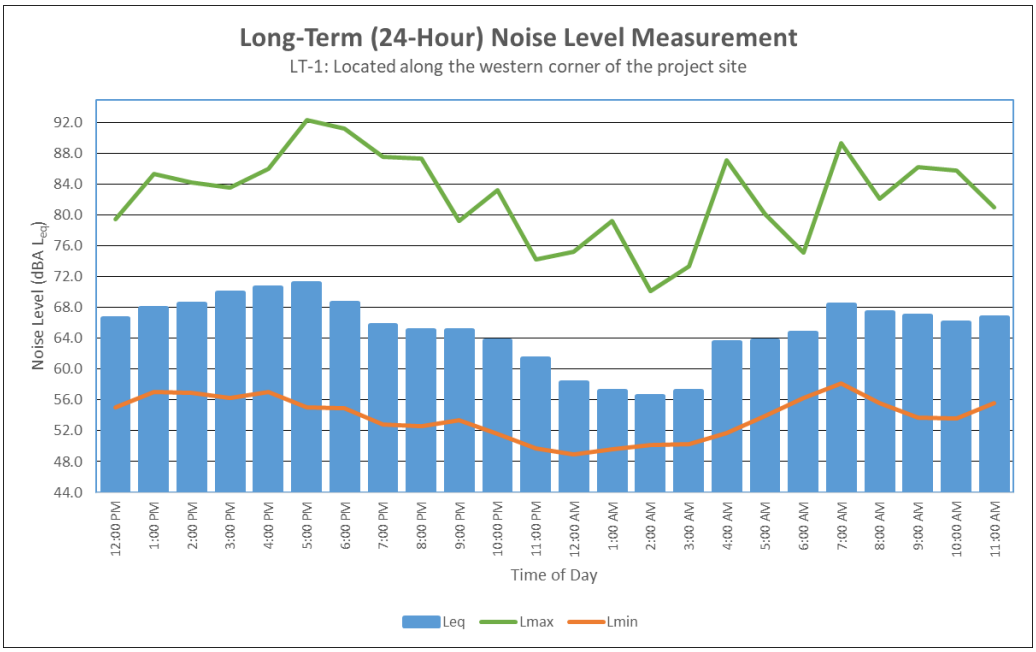
Comments:

Photo:

Long-Term (24-Hour) Noise Level Measurement Results at LT-1

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
12:00 PM	2/8/24	66.6	79.5	55.0
1:00 PM	2/8/24	68.0	85.4	57.0
2:00 PM	2/8/24	68.5	84.3	56.9
3:00 PM	2/8/24	69.9	83.6	56.3
4:00 PM	2/8/24	70.6	86.0	57.1
5:00 PM	2/8/24	71.1	92.4	55.0
6:00 PM	2/8/24	68.6	91.2	54.9
7:00 PM	2/8/24	65.7	87.6	52.8
8:00 PM	2/8/24	65.1	87.3	52.6
9:00 PM	2/8/24	65.1	79.3	53.4
10:00 PM	2/8/24	63.7	83.3	51.6
11:00 PM	2/8/24	61.4	74.2	49.7
12:00 AM	2/9/24	58.3	75.2	48.9
1:00 AM	2/9/24	57.1	79.2	49.6
2:00 AM	2/9/24	56.5	70.1	50.2
3:00 AM	2/9/24	57.1	73.4	50.3
4:00 AM	2/9/24	63.4	87.1	51.7
5:00 AM	2/9/24	63.7	80.1	53.9
6:00 AM	2/9/24	64.7	75.1	56.3
7:00 AM	2/9/24	68.4	89.3	58.2
8:00 AM	2/9/24	67.4	82.1	55.6
9:00 AM	2/9/24	66.9	86.2	53.7
10:00 AM	2/9/24	66.1	85.8	53.6
11:00 AM	2/9/24	66.7	81.0	55.6

Source: Compiled by LSA Associates, Inc. (2024).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



Noise Measurement Survey – 24 HR

Project Number: ESL2201.74
Project Name: Tustin Legacy SP

Test Personnel: Kevin Nguyendo
Equipment: Spark 706RC (SN:814)

Site Number: LT-2 Date: 2/8/24

Time: From 12:00 p.m. To 12:00 p.m.

Site Location: 2810 Warner Ave, Irvine, CA 92606. Located near the western façade of An apartment complex on a tree.

Primary Noise Sources: Traffic on Park Avenue.

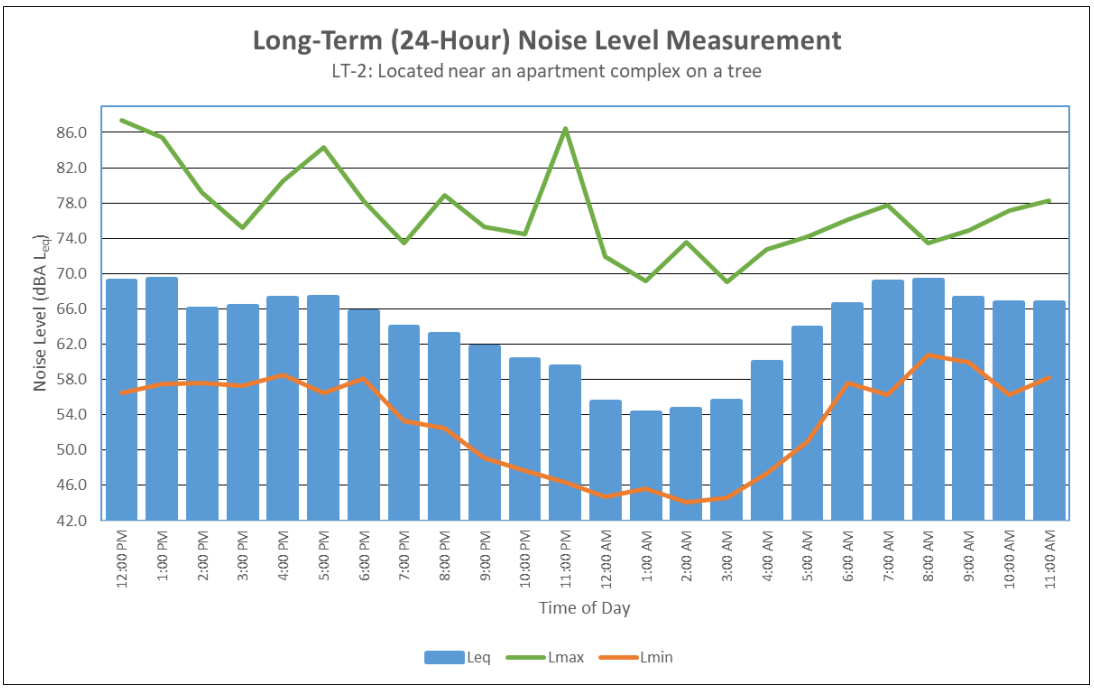
Comments:

Photo:

Long-Term (24-Hour) Noise Level Measurement Results at LT-2

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
12:00 PM	2/8/24	69.2	87.4	56.5
1:00 PM	2/8/24	69.4	85.4	57.5
2:00 PM	2/8/24	66.0	79.2	57.6
3:00 PM	2/8/24	66.3	75.2	57.3
4:00 PM	2/8/24	67.2	80.5	58.5
5:00 PM	2/8/24	67.3	84.3	56.5
6:00 PM	2/8/24	65.7	78.3	58.1
7:00 PM	2/8/24	63.9	73.5	53.3
8:00 PM	2/8/24	63.2	78.9	52.5
9:00 PM	2/8/24	61.7	75.3	49.1
10:00 PM	2/8/24	60.3	74.5	47.7
11:00 PM	2/8/24	59.5	86.5	46.3
12:00 AM	2/9/24	55.5	71.9	44.7
1:00 AM	2/9/24	54.3	69.2	45.6
2:00 AM	2/9/24	54.7	73.6	44.1
3:00 AM	2/9/24	55.6	69.1	44.6
4:00 AM	2/9/24	59.9	72.7	47.4
5:00 AM	2/9/24	63.8	74.2	51.0
6:00 AM	2/9/24	66.5	76.1	57.6
7:00 AM	2/9/24	69.0	77.8	56.3
8:00 AM	2/9/24	69.2	73.5	60.8
9:00 AM	2/9/24	67.2	74.9	60.0
10:00 AM	2/9/24	66.7	77.1	56.3
11:00 AM	2/9/24	66.7	78.3	58.2

Source: Compiled by LSA Associates, Inc. (2024).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



Noise Measurement Survey – 24 HR

Project Number: ESL2201.74
Project Name: Tustin Legacy SP

Test Personnel: Kevin Nguyendo
Equipment: Spark 706RC (SN:119)

Site Number: LT-3 Date: 2/8/24

Time: From 12:00 p.m. To 12:00 p.m.

Site Location: 117 Liberty St, Tustin, CA 92782. Near the northern façade of a townhome On a tree.

Primary Noise Sources: Intermittent train noise.

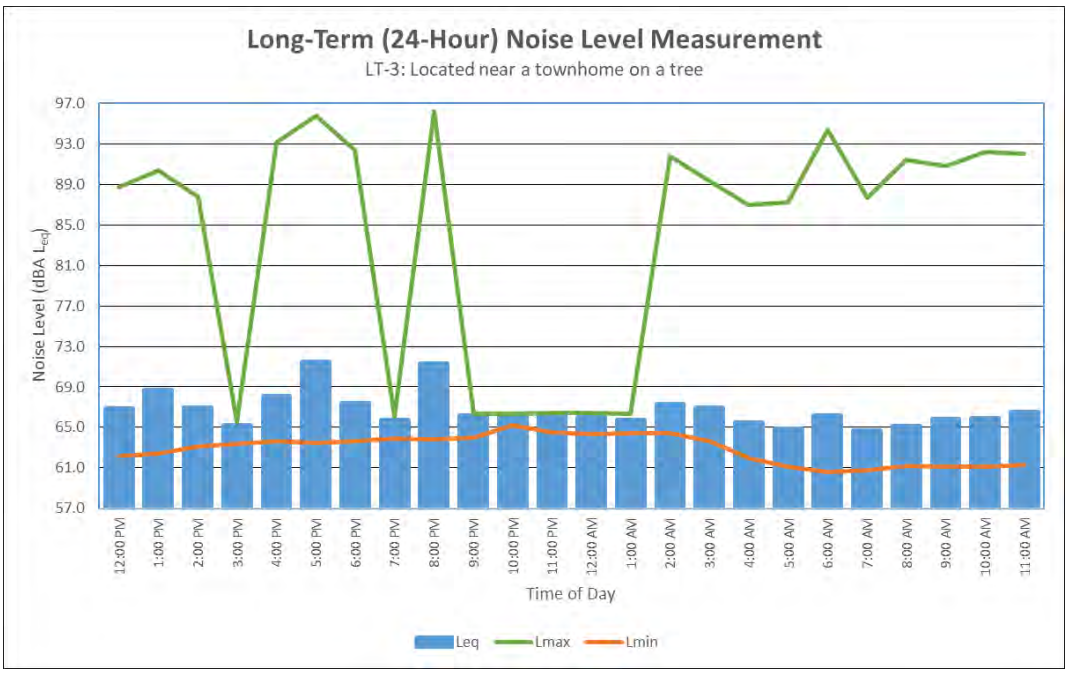
Comments:

Photo:

Long-Term (24-Hour) Noise Level Measurement Results at LT-3

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
12:00 PM	2/8/24	66.9	88.7	62.2
1:00 PM	2/8/24	68.7	90.4	62.4
2:00 PM	2/8/24	66.9	87.8	63.1
3:00 PM	2/8/24	65.2	65.6	63.4
4:00 PM	2/8/24	68.1	93.2	63.6
5:00 PM	2/8/24	71.5	95.8	63.5
6:00 PM	2/8/24	67.4	92.4	63.6
7:00 PM	2/8/24	65.8	66.1	63.9
8:00 PM	2/8/24	71.3	96.2	63.8
9:00 PM	2/8/24	66.2	66.3	64.0
10:00 PM	2/8/24	66.3	66.3	65.2
11:00 PM	2/8/24	66.3	66.4	64.5
12:00 AM	2/9/24	66.0	66.4	64.3
1:00 AM	2/9/24	65.7	66.3	64.4
2:00 AM	2/9/24	67.3	91.8	64.4
3:00 AM	2/9/24	66.9	89.3	63.6
4:00 AM	2/9/24	65.5	87.0	62.0
5:00 AM	2/9/24	64.9	87.2	61.1
6:00 AM	2/9/24	66.2	94.4	60.6
7:00 AM	2/9/24	64.7	87.7	60.8
8:00 AM	2/9/24	65.1	91.4	61.2
9:00 AM	2/9/24	65.8	90.8	61.1
10:00 AM	2/9/24	65.9	92.2	61.1
11:00 AM	2/9/24	66.5	92.0	61.3

Source: Compiled by LSA Associates, Inc. (2024).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



APPENDIX B

CONSTRUCTION NOISE LEVEL CALCULATIONS

Construction Calculations

Phase: Site Preparation

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Dozer	3	82	40	50	0.5	82	83
Tractor	4	84	40	50	0.5	84	86
					Combined at 50 feet	**86**	**88**
					Combined at Receptor 280 feet	**71**	**73**
					Combined at Receptor 370 feet	**69**	**70**

Phase: Grading

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Excavator	2	81	40	50	0.5	81	80
Grader	1	85	40	50	0.5	85	81
Dozer	1	82	40	50	0.5	82	78
Scraper	2	84	40	50	0.5	84	83
Tractor	2	84	40	50	0.5	84	83
					Combined at 50 feet	**90**	**88**
					Combined at Receptor 280 feet	**75**	**73**
					Combined at Receptor 370 feet	**73**	**71**

Phase:Building Construstion

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Crane	1	81	16	50	0.5	81	73
Man Lift	3	75	20	50	0.5	75	73
Generator	1	81	50	50	0.5	81	78
Tractor	3	84	40	50	0.5	84	85
Welder / Torch	1	74	40	50	0.5	74	70
					Combined at 50 feet	**86**	**81**
					Combined at Receptor 280 feet	**71**	**66**
					Combined at Receptor 370 feet	**69**	**63**

Phase:Paving

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Paver	2	77	50	50	0.5	77	77
All Other Equipment > 5 HP	2	85	50	50	0.5	85	85
Roller	2	80	20	50	0.5	80	76
					Combined at 50 feet	**87**	**86**
					Combined at Receptor 280 feet	**72**	**71**
					Combined at Receptor 370 feet	**69**	**69**

Phase:Architectural Coating

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Compressor (air)	1	78	40	50	0.5	78	74
					Combined at 50 feet	**78**	**74**
					Combined at Receptor 280 feet	**63**	**59**
					Combined at Receptor 370 feet	**61**	**57**

Sources: RCNM

[1]- Percentage of time that a piece of equipment is operating at full power.
dBA – A-weighted Decibels
Lmax- Maximum Level
Leq- Equivalent Level

APPENDIX C

FHWA TRAFFIC NOISE MODEL PRINTOUTS

TABLE Existing -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Tustin Ranch Rd. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23157 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	110.9	232.0	496.4

TABLE Existing -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. SB. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16868 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	91.5	188.6	402.2

TABLE Existing -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Newport Av. and Del Amo Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24765 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
75.5	124.3	246.2	519.9

TABLE Existing -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Del Amo Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26835 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.5	129.8	259.1	548.2

TABLE Existing -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Red Hill Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23443 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	120.7	237.9	501.6

TABLE Existing -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Kensington Park Dr. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22449 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	118.0	231.5	487.4

TABLE Existing -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Von Karman Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26488 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.41

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
67.3	123.3	254.5	542.8

TABLE Existing -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25738 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
76.4	126.9	252.3	533.3

TABLE Existing -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10156 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	70.9	137.3	288.0

TABLE Existing -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Armstrong Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11761 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	76.4	150.5	317.2

TABLE Existing -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Kensington Park Dr. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15695 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.40

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	89.5	180.8	383.7

TABLE Existing -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3238 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	110.3

TABLE Existing -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1904 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	101.8

TABLE Existing -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 691 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Existing -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13197 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	81.3	161.9	342.2

TABLE Existing -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Armstrong Av. and Legacy Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10960 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	73.7	144.0	302.8

TABLE Existing -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Legacy Rd. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7888 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.41

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	62.7	117.5	244.1

TABLE Existing -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16754 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.68

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	92.9	188.6	400.7

TABLE Existing -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Park Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20527 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	104.5	215.0	458.3

TABLE Existing -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17318 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	94.6	192.6	409.5

TABLE Existing -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Tustin Ranch Rd. and The District
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12147 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.03

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	80.1	154.7	324.5

TABLE Existing -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Red Hill Av. and Aston St.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30169 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.90

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	87.7	142.7	281.2	592.9

TABLE Existing -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Aston St. and Armstrong Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29137 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.8	140.1	275.1	579.4

TABLE Existing -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Armstrong Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30950 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
88.4	144.6	285.8	602.9

TABLE Existing -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Von Karman Av. and The District
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28240 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.62

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.1	137.8	269.7	567.6

TABLE Existing -26
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between The District and Jamboree Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34011 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
91.1	152.1	303.4	641.6

TABLE Existing -27
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23247 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	125.0	239.0	499.6

TABLE Existing -28
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Red Hill Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13451 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	86.8	166.1	347.4

TABLE Existing -29
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Von Karman Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14902 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	91.3	177.0	371.6

TABLE Existing -30
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15998 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	94.7	185.1	389.3

TABLE Existing -31
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Edinger Av. and Valencia Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21703 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	111.6	224.6	476.0

TABLE Existing -32
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Valencia Rd. and Victory Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23835 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.71

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
67.6	117.6	238.4	506.4

TABLE Existing -33
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24191 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
68.0	118.6	240.7	511.3

TABLE Existing -34
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Warner Av. and Carnegie Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23020 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	115.4	233.2	494.9

TABLE Existing -35
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Carnegie Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24300 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.79

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
68.1	118.9	241.4	512.9

TABLE Existing -36
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27510 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
71.5	127.8	261.5	556.8

TABLE Existing -37
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Valencia Av. and Victory Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2951 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.14

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	67.9	130.2

TABLE Existing -38
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3210 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	70.8	137.2

TABLE Existing -39
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4747 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.21

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	87.3	175.7

TABLE Existing -40
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Kensington Park Dr. between Edinger Av. and Valencia Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7057 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	111.5	227.8

TABLE Existing -41
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Walnut Av. and Valencia Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33978 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.02

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
81.1	146.4	300.6	640.5

TABLE Existing -42
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Legacy Rd. between Warner Av. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3278 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	74.1	140.3

TABLE Existing -43
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Valencia Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30381 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.6	137.2	279.7	594.8

TABLE Existing -44
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28663 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
75.8	132.7	269.4	572.3

TABLE Existing -45
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Victory Rd. and Warner Av N.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28485 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
75.7	132.2	268.3	570.0

TABLE Existing -46
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. N. and Warner Av. S.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27493 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.7	129.5	262.2	556.7

TABLE Existing -47
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. S. and Legacy Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20813 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	111.2	219.6	463.4

TABLE Existing -48
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Legacy Rd. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23676 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
70.9	119.2	238.3	504.4

TABLE Existing -49
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: The District between Park Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8936 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.69

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	69.3	128.2	265.4

TABLE Existing -50
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1017 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	73.5

TABLE Existing -51
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Victory Rd. and Jamboree Rd.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2996 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.95

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	71.1	132.8

TABLE Existing -52
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Jamboree Rd. and Warner Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8584 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	68.0	125.2	258.6

TABLE Existing -53
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Warner Av. and The District
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9358 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	70.7	131.8	273.5

TABLE Existing -54
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 48449 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
100.7	184.3	380.1	810.6

TABLE Existing -55
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 75334 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.07

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
124.0	241.4	507.3	1086.6

TABLE Existing -56
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Edinger Av. and Warner Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 74989 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.05

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
123.7	240.7	505.7	1083.3

TABLE Existing -57
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 59053 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
110.1	207.7	432.4	924.4

TABLE Existing -58
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7335 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	112.4	232.8

TABLE Existing -59
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Edinger Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5656 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.97

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	96.4	196.7

TABLE Existing -60
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Moffett Dr. and Warner Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11063 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	74.0	144.8	304.7

TABLE Existing -61
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13193 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	81.3	161.8	342.1

TABLE Existing -62
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16038 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	90.6	183.3	389.2

TABLE Existing -63
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18677 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.44

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	97.3	201.5	430.3

TABLE Existing -64
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Sycamore Av. and Edinger Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28247 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
72.2	129.8	266.0	566.6

TABLE Existing -65
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Auto Mall Dr. and Newport Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36326 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.5	154.0	314.7	669.7

TABLE Existing -66
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: SR-55 between Edinger Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 268324 SPEED (MPH): 80 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 85 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
826.6	1773.0	3815.7	8217.4

TABLE Existing -67
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between Edinger Av. and SR-55 NB Ramp
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13871 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	85.7	168.1	354.0

TABLE Existing -68
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between SR-55 NB Ramp and Valencia Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10183 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	73.5	138.8	289.0

TABLE Existing -69
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Del Amo Av. between Newport Av. and Edinger Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5374 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.48

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	95.6	191.2

TABLE Existing -70
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Newport Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7706 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.05

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	65.0	117.4	241.1

TABLE Existing -71
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Grand Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19580 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	103.4	209.4	444.5

TABLE Existing -72
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Dyer Rd. between Red Hill Av. and Pullman St.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30625 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.04

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
71.8	134.6	279.7	597.7

TABLE Existing -73
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Harvard Av. and Park Av.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3163 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	109.9

TABLE Existing -74
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd SB Ramp between Park Av. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7276 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	68.5	144.8

TABLE Existing -75
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd NB Ramp between Warner Av. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10198 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	85.1	181.1

TABLE Opening Year - No Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Tustin Ranch Rd. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23634 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
58.5	112.3	235.0	503.0

TABLE Opening Year - No Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. SB. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17464 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	93.4	192.9	411.6

TABLE Opening Year - No Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Newport Av. and Del Amo Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28825 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
79.4	135.0	271.2	574.7

TABLE Opening Year - No Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Del Amo Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31409 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	81.8	141.7	286.5	608.2

TABLE Opening Year - No Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Red Hill Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26573 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.2	129.1	257.5	544.6

TABLE Opening Year - No Project -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Kensington Park Dr. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23968 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.7	122.1	241.2	508.8

TABLE Opening Year - No Project -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Von Karman Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29000 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	70.1	130.2	269.9	576.4

TABLE Opening Year - No Project -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26959 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.6	130.1	259.9	549.8

TABLE Opening Year - No Project -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11327 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	74.9	147.0	309.4

TABLE Opening Year - No Project -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Armstrong Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13252 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	81.5	162.3	343.2

TABLE Opening Year - No Project -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Kensington Park Dr. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19245 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	100.6	206.2	439.2

TABLE Opening Year - No Project -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6892 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	86.2	179.5

TABLE Opening Year - No Project -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2078 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	0.0	0.0	107.0

TABLE Opening Year - No Project -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4025 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	82.0	159.3

TABLE Opening Year - No Project -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16687 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	92.7	188.1	399.6

TABLE Opening Year - No Project -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Armstrong Av. and Legacy Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15231 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	88.0	177.4	376.2

TABLE Opening Year - No Project -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Legacy Rd. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8459 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	64.8	122.6	255.5

TABLE Opening Year - No Project -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18644 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	98.8	202.0	430.0

TABLE Opening Year - No Project -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Park Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21588 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.79

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	107.7	222.2	473.9

TABLE Opening Year - No Project -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17749 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	96.0	195.7	416.2

TABLE Opening Year - No Project -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Tustin Ranch Rd. and The District
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13361 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.44

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	84.1	164.2	345.4

TABLE Opening Year - No Project -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Red Hill Av. and Aston St.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32224 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.19

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
89.5	147.8	293.2	619.2

TABLE Opening Year - No Project -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Aston St. and Armstrong Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30226 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	87.8	142.8	281.5	593.6

TABLE Opening Year - No Project -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Armstrong Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31785 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
89.2	146.7	290.6	613.6

TABLE Opening Year - No Project -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Von Karman Av. and The District
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30063 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
87.7	142.4	280.6	591.5

TABLE Opening Year - No Project -26
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between The District and Jamboree Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36360 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.71

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
93.2	157.8	316.6	670.5

TABLE Opening Year - No Project -27
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24050 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.4	127.1	244.0	510.8

TABLE Opening Year - No Project -28
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Red Hill Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14783 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	91.0	176.2	369.6

TABLE Opening Year - No Project -29
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Von Karman Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15355 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	92.7	180.4	379.0

TABLE Opening Year - No Project -30
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16666 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	96.7	189.9	399.9

TABLE Opening Year - No Project -31
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Edinger Av. and Valencia Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22781 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	114.7	231.6	491.5

TABLE Opening Year - No Project -32
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Valencia Rd. and Victory Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25955 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
69.8	123.5	251.9	535.7

TABLE Opening Year - No Project -33
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25374 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
69.2	121.9	248.2	527.8

TABLE Opening Year - No Project -34
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Warner Av. and Carnegie Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24461 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
68.3	119.4	242.4	515.1

TABLE Opening Year - No Project -35
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Carnegie Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25972 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
69.9	123.6	252.0	536.0

TABLE Opening Year - No Project -36
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28434 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
72.4	130.3	267.2	569.1

TABLE Opening Year - No Project -37
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Valencia Av. and Victory Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3836 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	77.7	153.5

TABLE Opening Year - No Project -38
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4748 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.21

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	87.3	175.8

TABLE Opening Year - No Project -39
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6575 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.62

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	105.3	216.8

TABLE Opening Year - No Project -40
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Kensington Park Dr. between Edinger Av. and Valencia Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8497 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	67.7	124.4	256.9

TABLE Opening Year - No Project -41
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Walnut Av. and Valencia Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 38619 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
85.7	158.0	326.7	697.3

TABLE Opening Year - No Project -42
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Legacy Rd. between Warner Av. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4733 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.93

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	89.2	176.4

TABLE Opening Year - No Project -43
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Valencia Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32935 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
80.1	143.8	294.6	627.4

TABLE Opening Year - No Project -44
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31371 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
78.5	139.7	285.5	607.5

TABLE Opening Year - No Project -45
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Victory Rd. and Warner Av N.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30770 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.59

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.9	138.2	282.0	599.8

TABLE Opening Year - No Project -46
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. N. and Warner Av. S.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29169 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
76.4	134.0	272.4	579.0

TABLE Opening Year - No Project -47
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. S. and Legacy Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21739 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	113.8	225.8	476.9

TABLE Opening Year - No Project -48
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Legacy Rd. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26744 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
73.9	127.5	257.6	546.7

TABLE Opening Year - No Project -49
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: The District between Park Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9842 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.11

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	72.4	135.9	282.7

TABLE Opening Year - No Project -50
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2064 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	106.6

TABLE Opening Year - No Project -51
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Victory Rd. and Jamboree Rd.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3819 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	79.9	154.2

TABLE Opening Year - No Project -52
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Jamboree Rd. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9991 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	72.9	137.2	285.5

TABLE Opening Year - No Project -53
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Warner Av. and The District
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9977 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	72.8	137.1	285.2

TABLE Opening Year - No Project -54
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 49440 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.24

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
101.6	186.5	385.1	821.6

TABLE Opening Year - No Project -55
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 76477 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
125.0	243.7	512.3	1097.6

TABLE Opening Year - No Project -56
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Edinger Av. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 75560 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
124.2	241.9	508.3	1088.8

TABLE Opening Year - No Project -57
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 59405 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.03

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	110.4	208.4	434.1	928.0

TABLE Opening Year - No Project -58
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8264 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.62

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.1	120.9	251.6

TABLE Opening Year - No Project -59
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Edinger Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6515 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	104.8	215.5

TABLE Opening Year - No Project -60
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Moffett Dr. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11896 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	76.9	151.6	319.6

TABLE Opening Year - No Project -61
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13606 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	82.7	165.0	349.2

TABLE Opening Year - No Project -62
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16265 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	91.3	185.0	392.9

TABLE Opening Year - No Project -63
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19945 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	101.2	210.4	449.5

TABLE Opening Year - No Project -64
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Sycamore Av. and Edinger Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28695 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
72.7	131.0	268.8	572.5

TABLE Opening Year - No Project -65
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Auto Mall Dr. and Newport Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 42128 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
92.0	168.0	346.4	738.8

TABLE Opening Year - No Project -66
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: SR-55 between Edinger Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 277669 SPEED (MPH): 80 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 85 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
845.5	1813.9	3903.7	8407.0

TABLE Opening Year - No Project -67
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between Edinger Av. and SR-55 NB Ramp
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18081 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	98.9	198.9	421.7

TABLE Opening Year - No Project -68
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between SR-55 NB Ramp and Valencia Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12976 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	82.8	161.2	338.8

TABLE Opening Year - No Project -69
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Del Amo Av. between Newport Av. and Edinger Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5753 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	99.3	199.7

TABLE Opening Year - No Project -70
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Newport Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9283 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	70.5	131.2	272.1

TABLE Opening Year - No Project -71
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Grand Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22860 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	113.1	231.3	492.4

TABLE Opening Year - No Project -72
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Dyer Rd. between Red Hill Av. and Pullman St.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32663 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.0	140.0	291.7	623.8

TABLE Opening Year - No Project -73
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Harvard Av. and Park Av.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5965 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.07

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	80.7	164.1

TABLE Opening Year - No Project -74
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd SB Ramp between Park Av. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7746 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	71.3	151.0

TABLE Opening Year - No Project -75
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd NB Ramp between Warner Av. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10397 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	86.2	183.4

TABLE Opening Year - With Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Tustin Ranch Rd. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23788 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
58.7	112.8	236.0	505.2

TABLE Opening Year - With Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. SB. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17504 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	93.5	193.2	412.2

TABLE Opening Year - With Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Newport Av. and Del Amo Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29432 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
80.0	136.6	274.8	582.7

TABLE Opening Year - With Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Del Amo Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32074 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	82.5	143.4	290.4	616.7

TABLE Opening Year - With Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Red Hill Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27341 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
78.0	131.1	262.2	555.0

TABLE Opening Year - With Project -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Kensington Park Dr. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24508 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.39

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
75.2	123.6	244.6	516.3

TABLE Opening Year - With Project -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Von Karman Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29643 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.90

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
70.8	132.0	273.8	584.9

TABLE Opening Year - With Project -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27125 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.7	130.5	260.9	552.1

TABLE Opening Year - With Project -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11703 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	76.2	150.0	316.2

TABLE Opening Year - With Project -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Armstrong Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13632 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.79

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	82.7	165.2	349.6

TABLE Opening Year - With Project -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Kensington Park Dr. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19905 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	102.6	210.8	449.1

TABLE Opening Year - With Project -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8459 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.90

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	97.8	205.3

TABLE Opening Year - With Project -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2332 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	114.4

TABLE Opening Year - With Project -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4762 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.96

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	89.5	177.1

TABLE Opening Year - With Project -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18035 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	96.9	197.7	420.7

TABLE Opening Year - With Project -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Armstrong Av. and Legacy Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16713 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	92.7	188.3	400.0

TABLE Opening Year - With Project -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Legacy Rd. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8647 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	65.5	124.3	259.2

TABLE Opening Year - With Project -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19506 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	101.4	208.0	443.1

TABLE Opening Year - With Project -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Park Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22057 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	109.1	225.3	480.7

TABLE Opening Year - With Project -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18159 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.03

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	97.3	198.6	422.6

TABLE Opening Year - With Project -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Tustin Ranch Rd. and The District
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13844 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.59

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	85.6	167.9	353.6

TABLE Opening Year - With Project -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Red Hill Av. and Aston St.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32375 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.21

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
89.7	148.1	294.0	621.1

TABLE Opening Year - With Project -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Aston St. and Armstrong Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30401 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
88.0	143.2	282.6	595.9

TABLE Opening Year - With Project -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Armstrong Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31926 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
89.3	147.0	291.4	615.4

TABLE Opening Year - With Project -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Von Karman Av. and The District
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30124 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.90

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
87.7	142.6	280.9	592.3

TABLE Opening Year - With Project -26
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between The District and Jamboree Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36799 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
93.6	158.9	319.0	675.9

TABLE Opening Year - With Project -27
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24126 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.93

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.5	127.3	244.5	511.8

TABLE Opening Year - With Project -28
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Red Hill Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14861 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	91.2	176.7	370.9

TABLE Opening Year - With Project -29
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Von Karman Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15360 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	92.8	180.4	379.0

TABLE Opening Year - With Project -30
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16838 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	97.3	191.1	402.7

TABLE Opening Year - With Project -31
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Edinger Av. and Valencia Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22965 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	115.2	232.8	494.2

TABLE Opening Year - With Project -32
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Valencia Rd. and Victory Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26753 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.21

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
70.7	125.7	256.9	546.6

TABLE Opening Year - With Project -33
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25577 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
69.4	122.5	249.5	530.5

TABLE Opening Year - With Project -34
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Warner Av. and Carnegie Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25014 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
68.8	120.9	246.0	522.8

TABLE Opening Year - With Project -35
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Carnegie Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26449 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	70.4	124.9	255.0	542.4

TABLE Opening Year - With Project -36
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28684 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
72.7	131.0	268.7	572.4

TABLE Opening Year - With Project -37
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Valencia Av. and Victory Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3915 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	78.5	155.4

TABLE Opening Year - With Project -38
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4840 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	88.2	177.9

TABLE Opening Year - With Project -39
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6783 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	107.3	221.3

TABLE Opening Year - With Project -40
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Kensington Park Dr. between Edinger Av. and Valencia Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8858 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	69.0	127.5	263.9

TABLE Opening Year - With Project -41
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Walnut Av. and Valencia Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 40145 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
87.2	161.7	335.1	715.4

TABLE Opening Year - With Project -42
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Legacy Rd. between Warner Av. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5569 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	97.5	195.6

TABLE Opening Year - With Project -43
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Valencia Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34089 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.04

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	81.2	146.7	301.3	641.9

TABLE Opening Year - With Project -44
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32783 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.87

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
79.9	143.4	293.8	625.5

TABLE Opening Year - With Project -45
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Victory Rd. and Warner Av N.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31755 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
78.9	140.7	287.8	612.5

TABLE Opening Year - With Project -46
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. N. and Warner Av. S.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29796 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.0	135.6	276.2	587.2

TABLE Opening Year - With Project -47
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. S. and Legacy Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22123 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	114.9	228.3	482.4

TABLE Opening Year - With Project -48
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Legacy Rd. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27581 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	74.8	129.8	262.8	557.9

TABLE Opening Year - With Project -49
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: The District between Park Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10375 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	74.2	140.4	292.6

TABLE Opening Year - With Project -50
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2520 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.19

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	65.9	119.7

TABLE Opening Year - With Project -51
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Victory Rd. and Jamboree Rd.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4183 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.40

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	83.6	163.2

TABLE Opening Year - With Project -52
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Jamboree Rd. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10338 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	74.1	140.1	291.9

TABLE Opening Year - With Project -53
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Warner Av. and The District
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10242 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	73.7	139.3	290.1

TABLE Opening Year - With Project -54
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 49964 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
102.1	187.7	387.7	827.3

TABLE Opening Year - With Project -55
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 76602 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.14

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
125.1	244.0	512.9	1098.8

TABLE Opening Year - With Project -56
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Edinger Av. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 75708 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
124.3	242.2	508.9	1090.2

TABLE Opening Year - With Project -57
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 59577 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.05

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
110.5	208.8	434.9	929.8

TABLE Opening Year - With Project -58
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8359 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.4	121.7	253.5

TABLE Opening Year - With Project -59
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Edinger Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6619 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	105.7	217.8

TABLE Opening Year - With Project -60
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Moffett Dr. and Warner Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11970 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	77.1	152.2	320.9

TABLE Opening Year - With Project -61
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13669 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	82.9	165.5	350.2

TABLE Opening Year - With Project -62
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16312 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	91.5	185.4	393.6

TABLE Opening Year - With Project -63
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20011 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	101.4	210.8	450.5

TABLE Opening Year - With Project -64
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Sycamore Av. and Edinger Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28935 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
73.0	131.6	270.2	575.7

TABLE Opening Year - With Project -65
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Auto Mall Dr. and Newport Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 42702 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
92.5	169.4	349.5	745.4

TABLE Opening Year - With Project -66
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: SR-55 between Edinger Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 277763 SPEED (MPH): 80 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 85 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
845.6	1814.3	3904.6	8408.9

TABLE Opening Year - With Project -67
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between Edinger Av. and SR-55 NB Ramp
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18411 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	99.9	201.3	426.7

TABLE Opening Year - With Project -68
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between SR-55 NB Ramp and Valencia Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13805 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	85.5	167.6	352.9

TABLE Opening Year - With Project -69
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Del Amo Av. between Newport Av. and Edinger Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5812 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	99.8	201.0

TABLE Opening Year - With Project -70
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Newport Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10141 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.24

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	73.4	138.4	288.3

TABLE Opening Year - With Project -71
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Grand Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23505 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
64.0	114.9	235.5	501.5

TABLE Opening Year - With Project -72
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Dyer Rd. between Red Hill Av. and Pullman St.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33040 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.4	141.0	293.9	628.5

TABLE Opening Year - With Project -73
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Harvard Av. and Park Av.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7251 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	90.4	186.2

TABLE Opening Year - With Project -74
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd SB Ramp between Park Av. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8006 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	72.8	154.3

TABLE Opening Year - With Project -75
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd NB Ramp between Warner Av. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10585 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	87.2	185.6

TABLE Future Year - No Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Tustin Ranch Rd. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23873 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
58.8	113.0	236.6	506.4

TABLE Future Year - No Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. SB. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18104 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	95.5	197.5	421.5

TABLE Future Year - No Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Newport Av. and Del Amo Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36539 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.7	154.5	315.9	672.3

TABLE Future Year - No Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Del Amo Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 40377 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.3	163.9	337.0	718.3

TABLE Future Year - No Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Red Hill Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31862 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.53

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.3	142.8	289.2	614.0

TABLE Future Year - No Project -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Kensington Park Dr. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27123 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.7	130.5	260.9	552.1

TABLE Future Year - No Project -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Von Karman Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34285 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.53

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
75.7	144.2	301.1	644.2

TABLE Future Year - No Project -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29092 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	79.6	135.7	272.8	578.2

TABLE Future Year - No Project -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13015 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.59

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	80.7	160.4	339.1

TABLE Future Year - No Project -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Armstrong Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15528 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	88.9	179.6	381.0

TABLE Future Year - No Project -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Kensington Park Dr. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24614 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
62.3	116.5	242.0	516.9

TABLE Future Year - No Project -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14721 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	68.3	139.1	295.8

TABLE Future Year - No Project -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2452 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	65.2	117.8

TABLE Future Year - No Project -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11169 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	76.8	146.9	307.1

TABLE Future Year - No Project -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22892 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.04

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	111.6	230.8	492.7

TABLE Future Year - No Project -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Armstrong Av. and Legacy Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23209 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	112.5	232.9	497.2

TABLE Future Year - No Project -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Legacy Rd. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9684 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	69.2	133.3	279.2

TABLE Future Year - No Project -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22694 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	111.0	229.5	489.9

TABLE Future Year - No Project -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Park Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23863 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
61.5	114.4	237.1	506.4

TABLE Future Year - No Project -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18673 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	98.9	202.2	430.5

TABLE Future Year - No Project -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Tustin Ranch Rd. and The District
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14790 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	88.7	175.1	369.3

TABLE Future Year - No Project -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Red Hill Av. and Aston St.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 35847 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
92.7	156.6	313.7	664.3

TABLE Future Year - No Project -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Aston St. and Armstrong Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31779 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
89.2	146.7	290.6	613.5

TABLE Future Year - No Project -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Armstrong Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32795 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.0	149.2	296.4	626.4

TABLE Future Year - No Project -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Von Karman Av. and The District
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33189 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.4	150.1	298.7	631.3

TABLE Future Year - No Project -26
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between The District and Jamboree Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41395 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
97.6	169.8	344.0	730.5

TABLE Future Year - No Project -27
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25772 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	83.9	131.5	254.7	534.5

TABLE Future Year - No Project -28
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Red Hill Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17538 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	99.4	196.1	413.6

TABLE Future Year - No Project -29
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Von Karman Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16327 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.07

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	95.7	187.5	394.6

TABLE Future Year - No Project -30
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17999 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	100.8	199.4	420.7

TABLE Future Year - No Project -31
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Edinger Av. and Valencia Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24358 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
68.2	119.1	241.8	513.7

TABLE Future Year - No Project -32
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Valencia Rd. and Victory Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28946 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	73.0	131.7	270.3	575.8

TABLE Future Year - No Project -33
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26502 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
70.4	125.0	255.3	543.2

TABLE Future Year - No Project -34
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Warner Av. and Carnegie Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27098 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
71.0	126.7	259.0	551.2

TABLE Future Year - No Project -35
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Carnegie Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29455 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
73.5	133.0	273.4	582.5

TABLE Future Year - No Project -36
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30317 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.4	135.3	278.5	593.8

TABLE Future Year - No Project -37
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Valencia Av. and Victory Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5635 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.95

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	96.2	196.2

TABLE Future Year - No Project -38
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7946 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	62.9	118.0	245.2

TABLE Future Year - No Project -39
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10493 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	72.0	140.1	294.3

TABLE Future Year - No Project -40
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Kensington Park Dr. between Edinger Av. and Valencia Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10263 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	73.8	139.5	290.5

TABLE Future Year - No Project -41
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Walnut Av. and Valencia Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 46230 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
93.0	176.2	367.4	785.7

TABLE Future Year - No Project -42
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Legacy Rd. between Warner Av. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6676 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	108.0	219.8

TABLE Future Year - No Project -43
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Valencia Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 38311 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
85.4	157.3	325.0	693.6

TABLE Future Year - No Project -44
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 37076 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.40

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.2	154.2	318.2	678.7

TABLE Future Year - No Project -45
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Victory Rd. and Warner Av N.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 35567 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.7	150.4	309.7	660.2

TABLE Future Year - No Project -46
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. N. and Warner Av. S.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32662 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.85

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
79.8	143.1	293.1	624.0

TABLE Future Year - No Project -47
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. S. and Legacy Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23623 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.44

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
70.8	119.0	238.0	503.6

TABLE Future Year - No Project -48
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Legacy Rd. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33220 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
80.4	144.5	296.3	631.0

TABLE Future Year - No Project -49
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: The District between Park Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11003 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	76.3	145.5	304.1

TABLE Future Year - No Project -50
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4308 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	84.9	166.2

TABLE Future Year - No Project -51
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Victory Rd. and Jamboree Rd.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5582 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	97.6	195.9

TABLE Future Year - No Project -52
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Jamboree Rd. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13007 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	82.9	161.5	339.4

TABLE Future Year - No Project -53
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Warner Av. and The District
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11304 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.71

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	77.3	148.0	309.5

TABLE Future Year - No Project -54
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 51562 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
103.5	191.3	395.8	844.8

TABLE Future Year - No Project -55
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 78343 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.24

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
126.6	247.4	520.5	1115.3

TABLE Future Year - No Project -56
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Edinger Av. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 76784 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
125.3	244.3	513.7	1100.5

TABLE Future Year - No Project -57
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 60160 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
111.0	210.0	437.7	935.8

TABLE Future Year - No Project -58
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10256 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	71.2	138.1	289.9

TABLE Future Year - No Project -59
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Edinger Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7903 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	62.8	117.6	244.4

TABLE Future Year - No Project -60
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Moffett Dr. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13227 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	81.4	162.1	342.7

TABLE Future Year - No Project -61
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14063 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	84.2	168.6	356.9

TABLE Future Year - No Project -62
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16344 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	91.6	185.6	394.1

TABLE Future Year - No Project -63
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22076 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	107.7	224.8	480.9

TABLE Future Year - No Project -64
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Sycamore Av. and Edinger Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29510 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
73.6	133.2	273.7	583.3

TABLE Future Year - No Project -65
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Auto Mall Dr. and Newport Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 48296 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	97.7	182.4	378.7	808.8

TABLE Future Year - No Project -66
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: SR-55 between Edinger Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 294346 SPEED (MPH): 80 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 85 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
878.6	1885.6	4058.4	8740.3

TABLE Future Year - No Project -67
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between Edinger Av. and SR-55 NB Ramp
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21821 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	110.1	224.5	477.5

TABLE Future Year - No Project -68
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between SR-55 NB Ramp and Valencia Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15145 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	89.8	177.7	375.1

TABLE Future Year - No Project -69
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Del Amo Av. between Newport Av. and Edinger Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6412 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	105.5	214.1

TABLE Future Year - No Project -70
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Newport Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12663 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.21

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	81.8	158.8	333.4

TABLE Future Year - No Project -71
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Grand Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27660 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
68.6	126.6	261.7	558.6

TABLE Future Year - No Project -72
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Dyer Rd. between Red Hill Av. and Pullman St.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36251 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.8	149.3	312.4	668.5

TABLE Future Year - No Project -73
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Harvard Av. and Park Av.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11971 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	62.9	122.9	258.4

TABLE Future Year - No Project -74
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd SB Ramp between Park Av. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8752 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	77.1	163.6

TABLE Future Year - No Project -75
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd NB Ramp between Warner Av. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10824 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	88.4	188.3

TABLE Future Year - With Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Tustin Ranch Rd. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24028 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
59.0	113.5	237.6	508.6

TABLE Future Year - With Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. SB. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18144 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	95.6	197.8	422.2

TABLE Future Year - With Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Newport Av. and Del Amo Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 37146 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
87.3	156.0	319.3	679.7

TABLE Future Year - With Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Del Amo Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41043 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.9	165.5	340.6	726.1

TABLE Future Year - With Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Red Hill Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32630 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.0	144.8	293.7	623.8

TABLE Future Year - With Project -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Kensington Park Dr. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27663 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
78.3	132.0	264.2	559.3

TABLE Future Year - With Project -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Von Karman Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34927 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.61

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
76.4	145.9	304.8	652.2

TABLE Future Year - With Project -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29258 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	79.8	136.1	273.8	580.4

TABLE Future Year - With Project -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13391 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.71

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	81.9	163.4	345.5

TABLE Future Year - With Project -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Armstrong Av. and Kensington Park Dr.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15908 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	90.2	182.4	387.2

TABLE Future Year - With Project -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Kensington Park Dr. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25275 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
63.1	118.4	246.2	526.1

TABLE Future Year - With Project -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16288 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	72.4	148.5	316.2

TABLE Future Year - With Project -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2705 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	67.9	124.9

TABLE Future Year - With Project -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Victory Rd. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11906 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	79.3	152.8	320.2

TABLE Future Year - With Project -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Red Hill Av. and Armstrong Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24240 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
61.9	115.5	239.6	511.7

TABLE Future Year - With Project -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Armstrong Av. and Legacy Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24691 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
62.4	116.7	242.5	518.0

TABLE Future Year - With Project -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Legacy Rd. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9872 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.39

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	69.9	134.9	282.7

TABLE Future Year - With Project -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Tustin Ranch Rd. and Park Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23556 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
61.1	113.5	235.1	502.0

TABLE Future Year - With Project -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Park Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24331 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
62.0	115.7	240.1	512.9

TABLE Future Year - With Project -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19082 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	100.1	205.1	436.7

TABLE Future Year - With Project -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Tustin Ranch Rd. and The District
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15272 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.02

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	90.2	178.7	377.2

TABLE Future Year - With Project -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Red Hill Av. and Aston St.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 35998 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	92.9	157.0	314.6	666.1

TABLE Future Year - With Project -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Aston St. and Armstrong Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31954 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
89.3	147.1	291.6	615.7

TABLE Future Year - With Project -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Armstrong Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32936 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.2	149.5	297.2	628.2

TABLE Future Year - With Project -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Von Karman Av. and The District
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33250 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.4	150.3	299.0	632.1

TABLE Future Year - With Project -26
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between The District and Jamboree Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41834 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
98.0	170.8	346.3	735.6

TABLE Future Year - With Project -27
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Barranca Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25847 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.0	131.7	255.2	535.5

TABLE Future Year - With Project -28
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Red Hill Av. and Von Karman Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17617 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.40

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	99.6	196.7	414.8

TABLE Future Year - With Project -29
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Von Karman Av. and Jamboree Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16332 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.07

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	95.7	187.5	394.7

TABLE Future Year - With Project -30
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Alton Pkwy. between Jamboree Rd. and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18171 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.53

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	101.3	200.6	423.4

TABLE Future Year - With Project -31
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Edinger Av. and Valencia Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24542 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
68.4	119.6	243.0	516.2

TABLE Future Year - With Project -32
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Valencia Rd. and Victory Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29745 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
73.8	133.8	275.1	586.3

TABLE Future Year - With Project -33
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26705 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
70.6	125.6	256.6	545.9

TABLE Future Year - With Project -34
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Warner Av. and Carnegie Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27651 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
71.6	128.2	262.4	558.7

TABLE Future Year - With Project -35
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Carnegie Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29933 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.70

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.0	134.3	276.2	588.8

TABLE Future Year - With Project -36
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30566 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.79

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.6	136.0	280.0	597.0

TABLE Future Year - With Project -37
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Valencia Av. and Victory Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5714 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	97.0	198.0

TABLE Future Year - With Project -38
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Victory Rd. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8037 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	63.3	118.8	247.1

TABLE Future Year - With Project -39
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Armstrong Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10701 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	72.8	141.8	298.1

TABLE Future Year - With Project -40
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Kensington Park Dr. between Edinger Av. and Valencia Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10623 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.44

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	75.0	142.4	297.2

TABLE Future Year - With Project -41
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Walnut Av. and Valencia Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 47756 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
94.5	179.8	375.3	802.8

TABLE Future Year - With Project -42
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Legacy Rd. between Warner Av. and Tustin Ranch Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7512 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.3	115.6	237.1

TABLE Future Year - With Project -43
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Valencia Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39464 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.5	160.1	331.4	707.4

TABLE Future Year - With Project -44
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 38487 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	85.6	157.7	326.0	695.7

TABLE Future Year - With Project -45
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Victory Rd. and Warner Av N.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36552 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.7	152.9	315.2	672.3

TABLE Future Year - With Project -46
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. N. and Warner Av. S.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33289 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.93

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
80.4	144.7	296.7	631.9

TABLE Future Year - With Project -47
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Warner Av. S. and Legacy Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24008 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	71.2	120.1	240.4	509.1

TABLE Future Year - With Project -48
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Tustin Ranch Rd. between Legacy Rd. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34057 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 50 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.03

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
81.2	146.6	301.1	641.5

TABLE Future Year - With Project -49
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: The District between Park Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11536 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	78.1	149.9	313.7

TABLE Future Year - With Project -50
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Moffett Dr. and Victory Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4764 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.96

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	89.5	177.1

TABLE Future Year - With Project -51
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Victory Rd. and Jamboree Rd.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5947 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	101.1	204.0

TABLE Future Year - With Project -52
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Jamboree Rd. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13354 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.44

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	84.0	164.2	345.3

TABLE Future Year - With Project -53
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Park Av. between Warner Av. and The District
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11569 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	78.2	150.1	314.2

TABLE Future Year - With Project -54
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 52087 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
103.9	192.4	398.4	850.5

TABLE Future Year - With Project -55
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 78469 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.24

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
126.7	247.7	521.0	1116.5

TABLE Future Year - With Project -56
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Edinger Av. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 76931 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
125.4	244.6	514.3	1101.9

TABLE Future Year - With Project -57
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 60331 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	111.2	210.4	438.5	937.6

TABLE Future Year - With Project -58
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Walnut Av. and Edinger Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10350 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.59

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	71.5	138.9	291.6

TABLE Future Year - With Project -59
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Edinger Av. and Moffett Dr.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8006 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.48

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	63.2	118.5	246.5

TABLE Future Year - With Project -60
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Moffett Dr. and Warner Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13300 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.68

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	81.6	162.7	344.0

TABLE Future Year - With Project -61
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Warner Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14126 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	84.4	169.0	357.9

TABLE Future Year - With Project -62
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Harvard Av. between Barranca Pkwy. and Alton Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16392 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.59

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	91.7	185.9	394.9

TABLE Future Year - With Project -63
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Walnut Av. between Jamboree Rd. NB and Harvard Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22142 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	107.9	225.3	481.8

TABLE Future Year - With Project -64
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Red Hill Av. between Sycamore Av. and Edinger Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29750 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL	65 CNEL	60 CNEL	55 CNEL
73.8	133.8	275.1	586.4

TABLE Future Year - With Project -65
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Edinger Av. between Auto Mall Dr. and Newport Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 48869 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 55 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.39

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
98.2	183.7	381.6	815.2

TABLE Future Year - With Project -66
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: SR-55 between Edinger Av. and Barranca Pkwy.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 294440 SPEED (MPH): 80 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 85 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
878.8	1886.0	4059.3	8742.2

TABLE Future Year - With Project -67
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between Edinger Av. and SR-55 NB Ramp
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22152 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	111.0	226.7	482.3

TABLE Future Year - With Project -68
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Newport Av. between SR-55 NB Ramp and Valencia Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15974 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.21

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	92.4	183.8	388.5

TABLE Future Year - With Project -69
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Del Amo Av. between Newport Av. and Edinger Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6470 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	106.1	215.4

TABLE Future Year - With Project -70
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Valencia Av. between Newport Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13521 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	84.6	165.5	348.1

TABLE Future Year - With Project -71
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Warner Av. between Grand Av. and Red Hill Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28305 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.70

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
69.3	128.3	265.7	567.2

TABLE Future Year - With Project -72
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Dyer Rd. between Red Hill Av. and Pullman St.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36627 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
78.2	150.2	314.5	673.1

TABLE Future Year - With Project -73
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Moffett Dr. between Harvard Av. and Park Av.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13256 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.53

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	66.4	131.0	276.3

TABLE Future Year - With Project -74
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd SB Ramp between Park Av. and Jamboree Rd. SB.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9012 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	78.6	166.8

TABLE Future Year - With Project -75
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/09/2024
ROADWAY SEGMENT: Jamboree Rd NB Ramp between Warner Av. and Jamboree Rd. NB.
NOTES: Tustin Legacy Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11012 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	89.4	190.5

Appendix D
Vehicle Miles Traveled Analysis

E | P | D SOLUTIONS, INC

WHERE EXPERIENCE AND PASSION MEET

Submitted on:	February 27, 2024
Revised on:	March 25, 2024, April 10, 2024, April 18, 2024, May 7, 2024, June 26, 2024
Prepared by:	Simon Lin, EIT, Abby Pal Meghan Macias, TE
To:	City of Tustin
Site:	Tustin Legacy Specific Plan Amendment EPD Project Number 23-068
Subject:	Vehicle Miles Traveled (VMT) Analysis

This technical study evaluates the potential vehicle miles traveled (VMT) for the proposed Tustin Legacy Specific Plan amendment (Project) to include an additional 4,970 residential units. The City of Tustin (City) proposes an amendment to the Tustin Legacy Specific Plan (TLSP) to meet the objectives of the General Plan 2021-2029 Housing Element. The Housing Element identified three sites (i.e. Planning Area (PA) 8, PA 13 &14, and PA 15) in the TLSP for rezoning to provide increased opportunity for housing in the City as part of Program 1.1a of the Housing Element.

Project Description

The three sites spread across two geographically defined areas, referred to as Neighborhoods in the TLSP: Neighborhood D and Neighborhood G. Neighborhood D North (PA 8) is generally bound by Valencia Avenue to the north, Tustin Ranch Road to the east, Warner Avenue to the south, and Armstrong Avenue to the west. Neighborhood D South (PA 13 &14) is generally bound by Warner Avenue to the north, Tustin Ranch Road to the east, Barranca Parkway to the south, and Armstrong Avenue to the west. Neighborhood G West (PA 15) is generally bound by Edinger Avenue to the north, Jamboree Road to the east, Warner Avenue to the south and Tustin Ranch Road to the west.

The difference in land use between the Approved Project and the Modified (Proposed) Project are shown in Table 1.

Residential Addition of TLSP

The updated Housing Element would accommodate the addition of 1,911 units within PA 8 of TLSP Neighborhood D North, the addition of 100 units to PA 13 & 14 of TLSP Neighborhood D South, and the addition of 200 units to PA 15 of TLSP Neighborhood G West. These changes result in a combined total of 2,211 additional Housing Element residential units (inclusive of buffer units). Additionally, the proposed modifications to the Housing Element include density bonus units that allow addition of 956 units within PA 8 of TLSP Neighborhood D North, the addition of 655 units to PA 13 and 14 of TLSP Neighborhood D South, and the addition of 1,148 units to PA 15 of TLSP Neighborhood G West. The density bonus units will also be analyzed for increased density due to the provision of density bonuses available under the Surplus Land Act and other state housing incentives. These changes result in a combined total of another 2,759 additional residential units. In total, the VMT analysis presented in this document evaluates a total of 4,970 additional dwelling units within the TLSP.

Nonresidential Uses of TLSP

In addition to the proposed changes above, the TLSP would be amended to reflect updates to nonresidential development by land use type. The Project would replace 93,600 square feet (SF) of hotel use, 95,200 SF

of neighborhood commercial use, 482,900 SF of community commercial use and 529,000 SF of senior housing use with 1,200,700 SF of office use. Overall, the changes amongst the various nonresidential land uses would result in no change in total square footage and a reduction in trip generation, as reflected in Table 1.

The Project location is shown in Figure 1. Please note that this VMT analysis is based on the requirements of the C*ity of Tustin Vehicle Miles Traveled Analysis Guidelines*.

Project Trip Generation

The Project trip generation was calculated using trip rates from the Institute of Transportation Engineers, *Trip Generation 11th Edition*, 2021. Existing conditions (Baseline) were assessed using ITE trip rates for Land Use Code 310 (Hotel), 822 (Neighborhood Commercial), 820 (Community Commercial), 710 (Office), 251 (Continuing Care - Senior Housing) and 525 (High School). The rates for Project Parks (Legacy Park and Sports Park) were taken from the previously approved TLSP. Based on the density of the proposed housing, trip rates for Land Use Code 210 (Single-family Housing) and 221 Multifamily Housing (Mid-Rise) were used. The ITE rates used for the trip generation can be found in *Appendix A*. As shown in Table 1, the Project would generate approximately 15,679 daily trips including 3,251 trips during the AM peak hour and 1,777 trips during the PM peak hour.

Table 1: Project Trip Generation

Land Use	ITE Trip Rate/Unit[1]			Unit[2]	Neighborhood D South (PA 13 & 14)				Neighborhood D North (PA 8)				Neighborhood G (PA 15)				Total			
No-Project	**Daily**	**AM**	**PM**		**Approved Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Approved Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Approved Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Approved Project**	**Daily Trips**	**AM Trips**	**PM Trips**
Single Family Housing	9.43	0.7	0.94	DU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multi-Family Housing	4.54	0.37	0.39	DU	1,672	7,591	619	652	-	-	-	-	2,814	12,776	1,041	1,097	4,486	20,366	1,660	1,750
Hotel	7.99	0.46	0.59	RM	550	4,395	253	325	-	-	-	-	-	-	-	-	550	4,395	253	325
Neighborhood Commercial	54.45	2.36	6.59	TSF	-	-	-	-	-	-	-	-	95.2	5,184	225	627	95	5,184	225	627
Community Commercial	37.01	0.84	3.4	TSF	20.4	755	17	69	1,547.69	57,280	1,300	5,262	-	-	-	-	1,568	58,035	1,317	5,332
Office	10.84	1.52	1.44	TSF	420	4,553	638	605	-	-	-	-	-	-	-	-	420	4,553	638	605
Continuing Care - Senior Housing	4.31	0.24	0.3	DU	-	-	-	-	-	-	-	-	404	1,741	97	121	404	1,741	97	121
High School	1.94	0.52	0.14	STU	-	-	-	-	1,784	3,461	928	250	-	-	-	-	1,784	3,461	928	250
Park - Legacy Park (Passive)	5	0	0	AC	6	30	-	-	54	270	-	-	31	155	-	-	91	455	-	-
Park - Sports Park (Active)	53.8	0.01	7.5	AC	-	-	-	-	45	2,421	0	338	-	-	-	-	45	2,421	0	338
No-Project Total						**17,323**	**1,527**	**1,651**		**63,432**	**2,228**	**5,849**		**19,855**	**1,363**	**1,846**		**100,611**	**5,118**	**9,346**
Project Land Use Changes	**Daily**	**AM**	**PM**	**Unit**	**Project Addition**	**Daily Trips**	**AM Trips**	**PM Trips**	**Project Addition**	**Daily Trips**	**AM Trips**	**PM Trips**	**Project Addition**	**Daily Trips**	**AM Trips**	**PM Trips**	**Project Addition**	**Daily Trips**	**AM Trips**	**PM Trips**
Single Family Housing	9.43	0.7	0.94	DU	117	1,103	82	110	-	-	-	-	692	6,526	484	650	809	7,629	566	760
Multi-Family Housing	4.54	0.37	0.39	DU	638	2,897	236	249	2,867	13,016	1,061	1,118	656	2,978	243	256	4,161	18,891	1,540	1,623
Hotel	7.99	0.46	0.59	RM	(430)	(3,436)	(198)	(254)	121	967	56	71	-	-	-	-	(309)	(2,469)	(142)	(182)
Neighborhood Commercial	54.45	2.36	6.59	TSF	-	-	-	-	-	-	-	-	(95)	(5,184)	(225)	(627)	(95)	(5,184)	(225)	(627)
Community Commercial	37.01	0.84	3.4	TSF	(10)	(385)	(9)	(35)	(509)	(18,838)	(428)	(1,731)	37	1,351	31	124	(483)	(17,872)	(406)	(1,642)
Office	10.84	1.52	1.44	TSF	23	249	35	33	473	5,127	719	681	705	7,639	1,071	1,015	1,201	13,016	1,825	1,729
Continuing Care - Senior Housing	4.31	0.24	0.3	DU	521	2,246	125	156	-	-	-	-	(134)	(578)	(32)	(40)	387	1,668	93	116
High School	1.94	0.52	0.14	STU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Park - Legacy Park (Passive)	5	0	0	AC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Park - Sports Park (Active)	53.8	0.01	7.5	AC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Project Changes Total						**2,674**	**271**	**259**		**272**	**1,408**	**140**		**12,732**	**1,572**	**1,378**		**15,679**	**3,251**	**1,777**
Total Land Use	**Daily**	**AM**	**PM**	**Unit**	**Modified Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Modified Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Modified Project**	**Daily Trips**	**AM Trips**	**PM Trips**	**Modified Project**	**Daily Trips**	**AM Trips**	**PM Trips**
Single Family Housing	9.43	0.7	0.94	DU	117	1,103	82	110	-	-	-	-	692	6,526	484	650	809	7,629	566	760
Multi-Family Housing	4.54	0.37	0.39	DU	2,310	10,487	855	901	2,867	13,016	1,061	1,118	3,470	15,754	1,284	1,353	8,647	39,257	3,199	3,372
Hotel	7.99	0.46	0.59	RM	120	959	55	71	121	967	56	71	-	-	-	-	241	1,926	111	142
Neighborhood Commercial	54.45	2.36	6.59	TSF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Community Commercial	37.01	0.84	3.4	TSF	10	370	8	34	1,039	38,442	872	3,532	36.5	1,351	31	124	1,085	40,163	912	3,690
Office	10.84	1.52	1.44	TSF	443	4,802	673	638	473	5,127	719	681	704.7	7,639	1,071	1,015	1,621	17,568	2,463	2,334
Continuing Care - Senior Housing	4.31	0.24	0.3	DU	521	2,246	125	156	-	-	-	-	270	1,164	65	81	791	3,409	190	237
High School	1.94	0.52	0.14	STU	-	-	-	-	1,784	3,461	928	250	-	-	-	-	1,784	3,461	928	250
Park - Legacy Park (Passive)	5	0	0	AC	6	30	-	-	54	270	-	-	31	155	-	-	91	455	-	-
Park - Sports Park (Active)	53.8	0.01	7.5	AC	-	-	-	-	45	2,421	0	338	-	-	-	-	45	2,421	0	338
Total						**19,997**	**1,799**	**1,910**		**63,704**	**3,636**	**5,989**		**32,588**	**2,935**	**3,224**		**116,289**	**8,370**	**11,123**

[1] Trip rates from the Institute of Transportation Engineers, *Trip Generation Manual,11th Edition, 2021*.

[2] Units:

DU = Dwelling Units

RM = Rooms

TSF = Thousand Square Feet

STU = Students

AC = Acres

Background

Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to replace Level of Service (LOS) as the appropriate method for evaluating transportation impacts under CEQA. SB 743 specified that the new criteria should promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. The bill also specified that delay-based LOS could no longer be considered an indicator of a significant impact on the environment under CEQA. In response, the Natural Resources Agency amended the CEQA Guidelines to include new Section 15064.3 - Determining the Significance of Transportation Impacts. The section states that Vehicle Miles Traveled (VMT) is the most appropriate measure of a project's transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. Section 15064.3(c) states that the provisions of the section shall apply statewide beginning on July 1, 2020.

City of Tustin VMT Screening Criteria

The Project is located in the City of Tustin (City). The City's Guidelines provide the following screening thresholds to assess whether further VMT analysis is required. If a project meets one of the following criteria, then the VMT impact of the project would be considered less-than-significant and no further analysis of VMT would be required:

1. The project consists of 100% affordable housing.
2. The project is located within one half (½) mile of qualifying transit.
3. The project type has been identified as local serving land use.
4. The project is in a low VMT area.
5. The project generates less than 500 daily vehicle trips.

The applicability of each criterion to the project is discussed below:

Screening Criteria 1 – Affordable Housing Screening: As per the City's guidelines, projects which consist of 100% affordable housing will have a less than significant impact on VMT.

The Project does not consist of 100% affordable housing and therefore would not satisfy the requirements of Screening criteria 1 - Affordable Housing Screening.

Screening Criteria 2 – High Quality Transit Screening: As per the City's guidelines, projects located within one half (½) mile of qualifying transit may be presumed to have a less than significant impact. Qualifying transit is defined as follows:

- **Major transit stop** means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (Pub. Resources Code, § 21064.3)
- **High-quality transit corridor** means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. (Pub. Resources Code, § 21155).

The High-Quality Transit Area from the City's Guideline is shown in Figure 2. As shown in Figure 2, Neighborhood G West is within one half (½) mile of qualifying transit. However, Neighborhood D North is located approximately 1 mile away from qualifying transit; Neighborhood D South is located approximately

1.5 miles away from qualifying transit. Therefore the project would not satisfy the requirements of Screening Criteria 2 – High Quality Transit screening.

Screening Criteria 3 - Project Type Screening: As per the City's guidelines, projects which propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses would have a less than significant impact on VMT. The types of projects considered local serving include K-12 schools, local parks, day care centers, gas stations, libraries, fire stations, and other local serving civic uses.

This screening criteria would be discussed separately for the residential and non-residential portion of the Project in sections below.

Screening Criteria 4 - Low VMT Area Screening: The City's guidelines include a screening threshold for projects located in a low VMT generating area. Low VMT generating area is defined as traffic analysis zones (TAZs) with a total daily VMT/Service Population (employment plus population) that is less than the base level for the city.

This screening criteria would be discussed separately for the residential and non-residential portion of the Project in sections below.

Screening Criteria 5 - Generating less than 500 daily vehicle trips: As per the City's guidelines, projects which generate less than 500 daily vehicle trips would have a less than significant impact on VMT.

This screening criteria would be discussed separately for the residential and non-residential portion of the Project in sections below.

The City of Tustin VMT screening form for the Project can be found in *Appendix B*.

Residential VMT Screening

Screening Criteria 3 - Project Type Screening:

Screening Criteria 3 would not apply to the residential portion of the Project.

Screening Criteria 4 - Low VMT Area Screening:

The Map of Low VMT Generating Area for VMT per capita from the City's Guideline is shown in Figure 3. As shown in Figure 3, the Project is not located in a low VMT area. Therefore, the residential portion of the Project would not satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening.

Screening Criteria 5 - Generating less than 500 daily vehicle trips:

As shown in Table 1, the residential portion of the Project is forecasted to generate 26,520 daily trips, which is more than 500 daily vehicle trips. Therefore, the residential portion of the Project would not meet Screening Criteria 5.

Because the residential portion of the Project would not meet any of the City's screening criteria, the residential portion of the Project's impact on VMT would not be considered less-than-significant and an analysis of VMT would be required.

Non-residential VMT Screening

Screening Criteria 3 - Project Type Screening:

The non-residential portion of the project proposes locally serving office use with a net square footage of 0 SF, which is less than 50,000 SF. Therefore, it would satisfy the requirements of Screening Criteria 3 - Project Type Screening.

Screening Criteria 4 - Low VMT Area Screening:

The Map of Low VMT Generating Area for VMT per employee from the City's Guideline is shown in Figure 4. As shown in Figure 4, the non-residential portion of the Project is not located in a low VMT area. Therefore, the non-residential portion of the Project would not satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening.

Screening Criteria 5 - Generating less than 500 daily vehicle trips:

As shown in Table 1, the non-residential portion of the Project is forecasted to generate 10,841 fewer (negative 10,841) daily trips, which is less than 500 daily vehicle trips. Therefore, the non-residential portion of the Project would meet Screening Criteria 5.

The non-residential portion of the Project would meet Screening Criteria 3 – Project Type Screening; and Screening Criteria 5 – Generating less than 500 daily vehicle trips, and therefore the non-residential portion of the Project's impact on VMT would be considered less-than-significant and an analysis of VMT would not be required.

VMT Analysis Methodology

The City's guidelines require use of the Orange County Transportation Analysis Model 5.0 v.6.22.23 (OCTAM) for preparation of VMT analysis.

The Project is located within three Model Traffic Analysis Zones (TAZs), TAZ 1133 (Neighborhood D North), TAZ 1134 (Neighborhood G West), and TAZ 1136 (Neighborhood D South). The total population and employed population of the Project was calculated using the current household average in each TAZ. The Project total households and population was entered into TAZ 1133, 1134 and 1136.

The Model includes validated scenarios for 2016 and 2045. These scenarios have been validated using existing traffic counts. Data for years between 2016 and 2045 can be extrapolated using linear interpolation between the 2016 and 2045 Model output. The Model was run for the base year (2016) and future year (2045) without and with-project conditions (i.e. four full Model runs).

As noted below under the discussion of significance thresholds, the City's significance threshold for residential projects is based on the project's home-based VMT (HB VMT) per capita.

Residential VMT Significance Threshold

The significance criteria from the City's guidelines are as follows:

The City of Tustin VMT Guidelines have relied upon the recommendations provided by OPR and modeling data provided by OCTA to establish the following VMT thresholds of significance for residential land use projects:

> Residential Projects: A significant transportation impact occurs if:

1. The project's base year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

2. The project's future year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

The metric utilized as the residential VMT threshold of significance for City of Tustin is the average city-wide VMT under 2016 Base Model Year, which has been calculated to be 15.0 HB VMT per capita. The OPR Technical Advisory recommends that a fifteen percent reduction in VMT below that of existing development may be a reasonable threshold. However, given that the City of Tustin is primarily located within a suburban setting, the amount of VMT reduction from an individual land use project is limited, and it is likely infeasible to achieve a 15% reduction below the citywide average for many areas in the City. However, by ensuring that land use development projects result in no net increase in VMT over the current base year citywide VMT averages, a sustained reduction in citywide VMT and GHG emissions will occur, the Project's impact on VMT would be considered less-than-significant.

Project Residential VMT Evaluation

The total HB VMT of TAZs 1133, 1134 and 1136 were evaluated using the OCTAM VMT post-processor. To determine the Project's HB VMT per capita, the total HB VMT of TAZs 1133, 1134 and 1136 is divided by the total residents of TAZs 1133, 1134 and 1136 respectively. Tustin Citywide HB VMT per capita was obtained from the OCTAM base year model following a similar process. The VMT analysis results per the City's significance criteria are shown in Table 2.

As shown in the tables, all three Project TAZs' HB VMT per capita would be lower than the OCTAM base model year citywide average HB VMT per capita for the City of Tustin under both base and future year conditions. The Project TAZ's HB VMT per capita would be 44.4% for TAZ 1133, 6.3% for TAZ 1134 & 45.2% for TAZ 1136 below the City's threshold under base conditions and 27.5% TAZ 1133, 3.7% TAZ 1134 & 40.1% for TAZ 1136 below the City's threshold under future conditions, respectively. Overall, the Project's HB VMT per capita would be 32.1% below the City's threshold under base conditions and 20.3% below the City's threshold under future conditions.

Overall, the entire Project would therefore result in a less than significant VMT impact.

If you have any questions, please feel free to contact me at techservices@epdsolutions.com or at (949) 794-1180.

Table 2: VMT Analysis of Project Impact per City Guidelines

	Base Year 2016	**Future Year 2045**
Project TAZ 1133 Zone Total Home-based VMT	72,732	94,803
TAZ 1133 Total Residents	8,744	8,744
Project TAZ 1133 HB VMT per capita	**8.3**	**10.8**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Total Residents	90,762	90,762
City of Tustin Baseline HB VMT per capita	**15.0**	**15.0**
% Above/Below Threshold	-44.4%	-27.5%
Impact?	**No**	**No**

	Base Year 2016	**Future Year 2045**
Project TAZ 1134 Zone Total Home-based VMT	73,824	182,731
TAZ 1134 Total Residents	5,267	12,694
Project TAZ 1134 HB VMT per capita	**14.0**	**14.4**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Total Residents	90,762	90,762
City of Tustin Baseline HB VMT per capita	**15.0**	**15.0**
% Above/Below Threshold	-6.3%	-3.7%
Impact?	**No**	**No**

	Base Year 2016	**Future Year 2045**
Project TAZ 1136 Zone Total Home-based VMT	17,387	66,278
TAZ 1136 Total Residents	2,134	7,402
Project TAZ 1136 HB VMT per capita	**8.2**	**9.0**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Total Residents	90,762	90,762
City of Tustin Baseline HB VMT per capita	**15.0**	**15.0**
% Above/Below Threshold	-45.2%	-40.1%
Impact?	**No**	**No**

	Base Year 2016	**Future Year 2045**
TLSP Total Home-based VMT	163,943	343,812
TLSP Total Residents	16,145	28,840
TLSP HB VMT per capita	**10.2**	**11.9**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Total Residents	90,762	90,762
City of Tustin Baseline HB VMT per capita	**15.0**	**15.0**
% Above/Below Threshold	-32.1%	-20.3%
Impact?	**No**	**No**

Figure 1: Project Site Location

Figure 2: High-Quality Transit Area

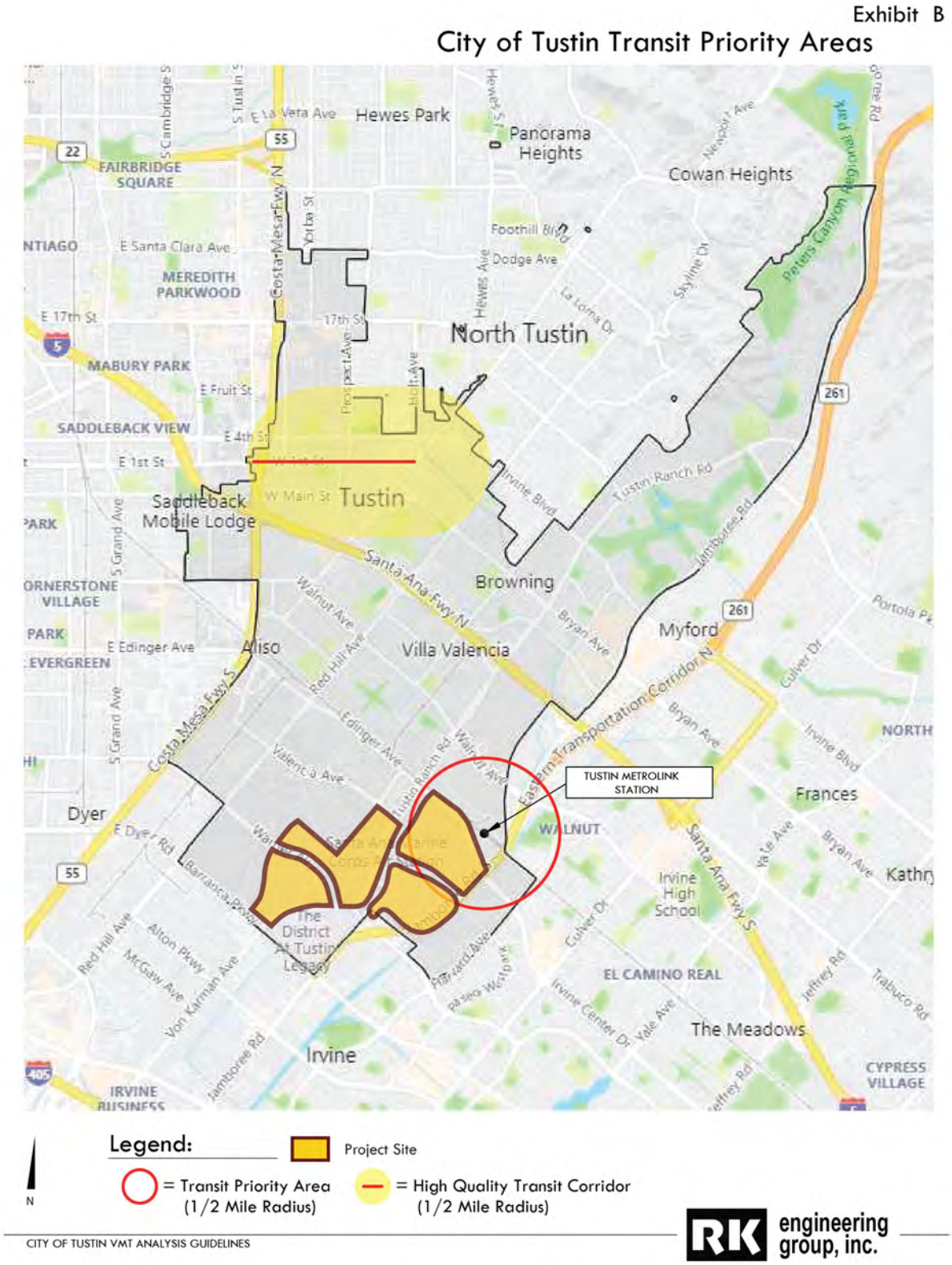


Figure 3: Low VMT Generating Area - VMT per capita

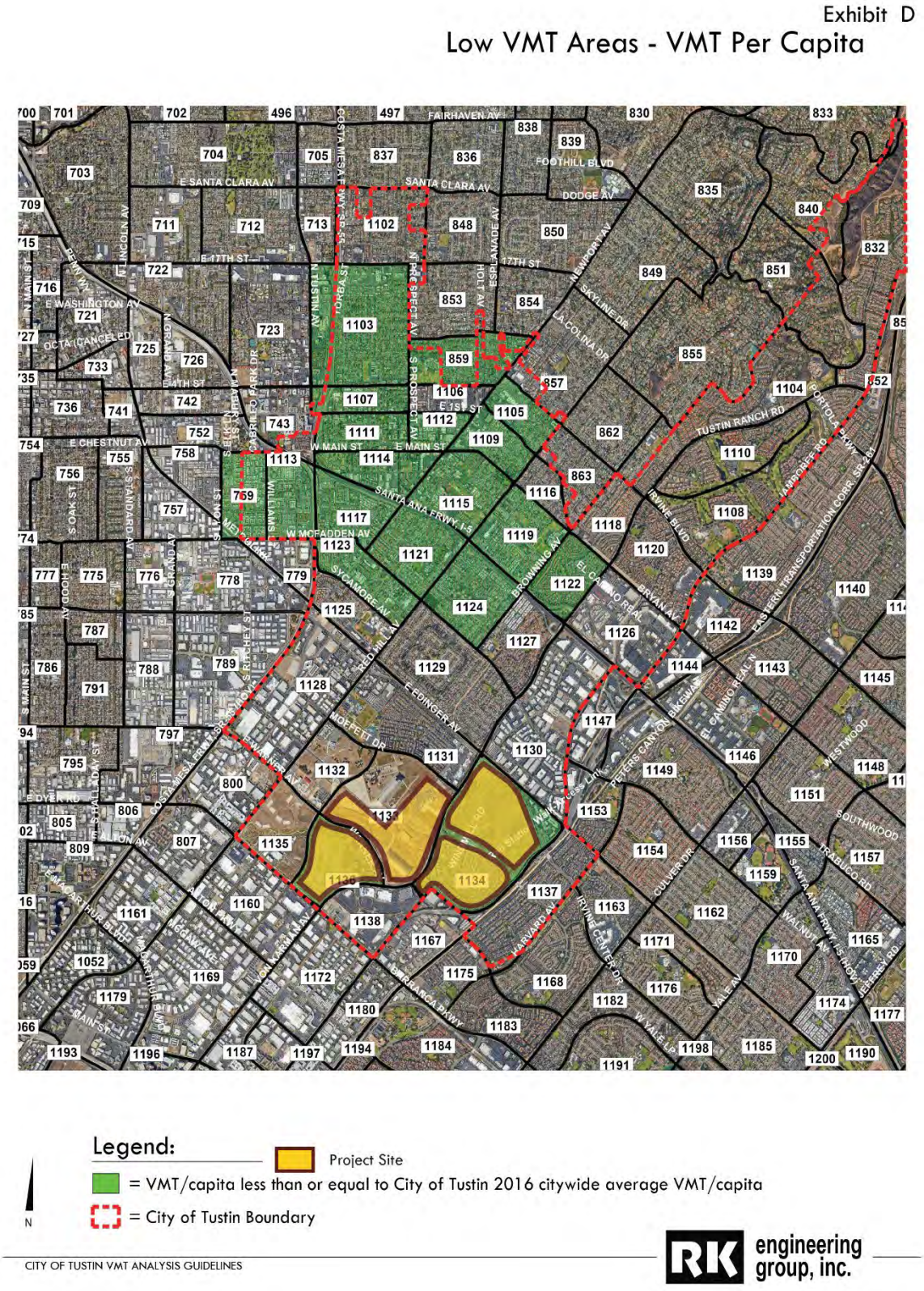
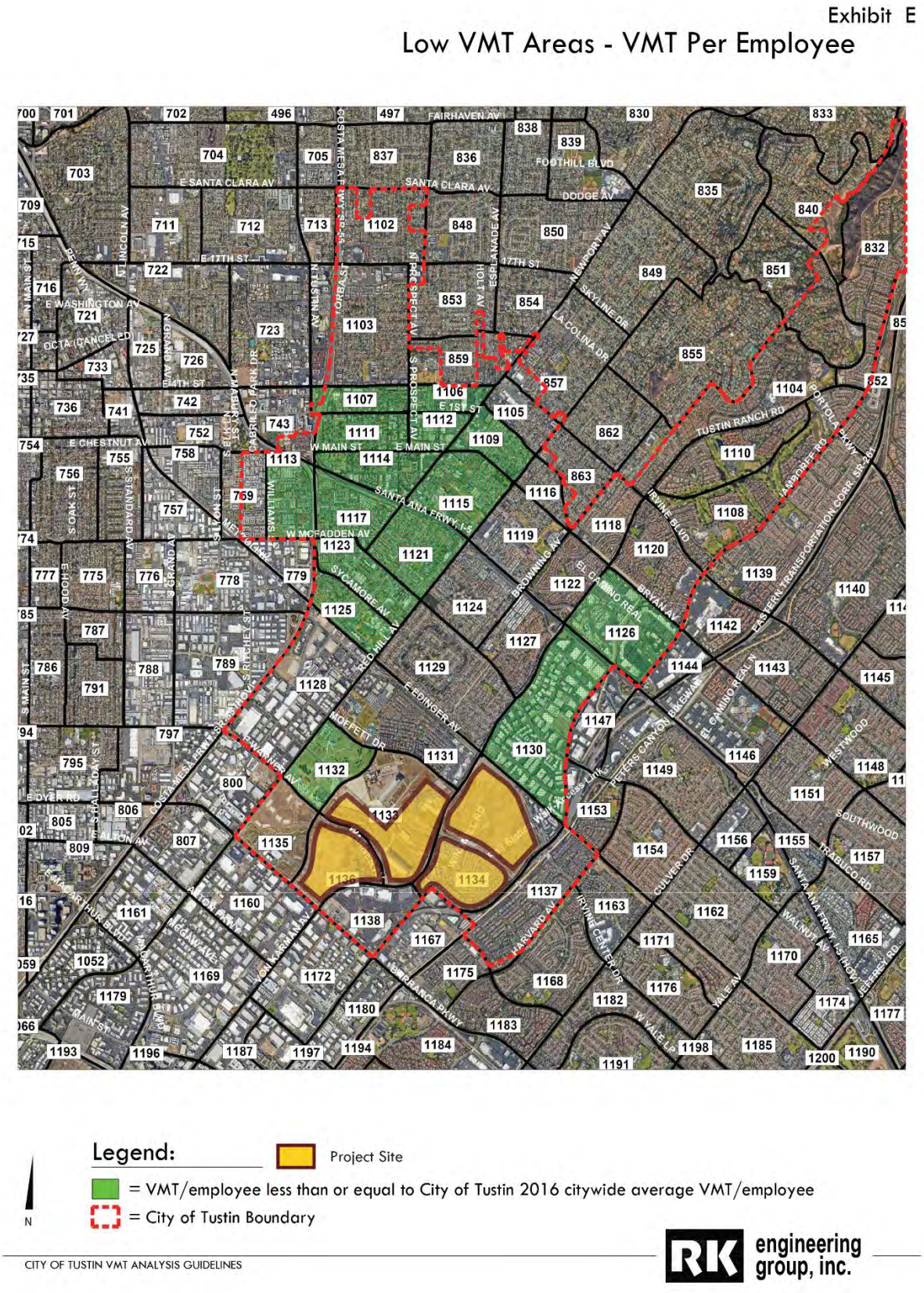


Figure 4: Low VMT Generating Area - VMT per employee



APPENDIX A – ITE Trip Generation Rates

Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

Single-Family Detached Housing
(210)

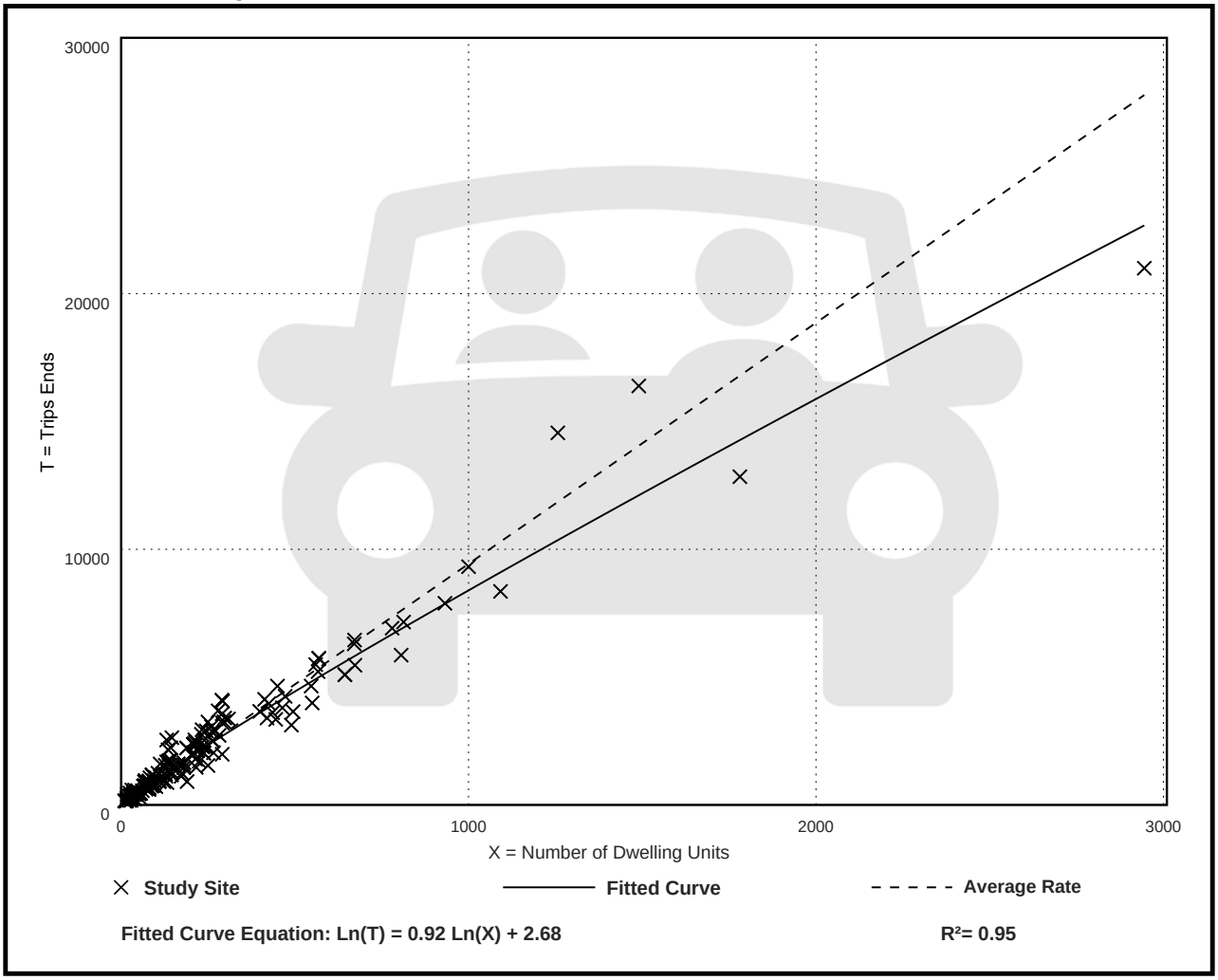
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.68

R^2= 0.95

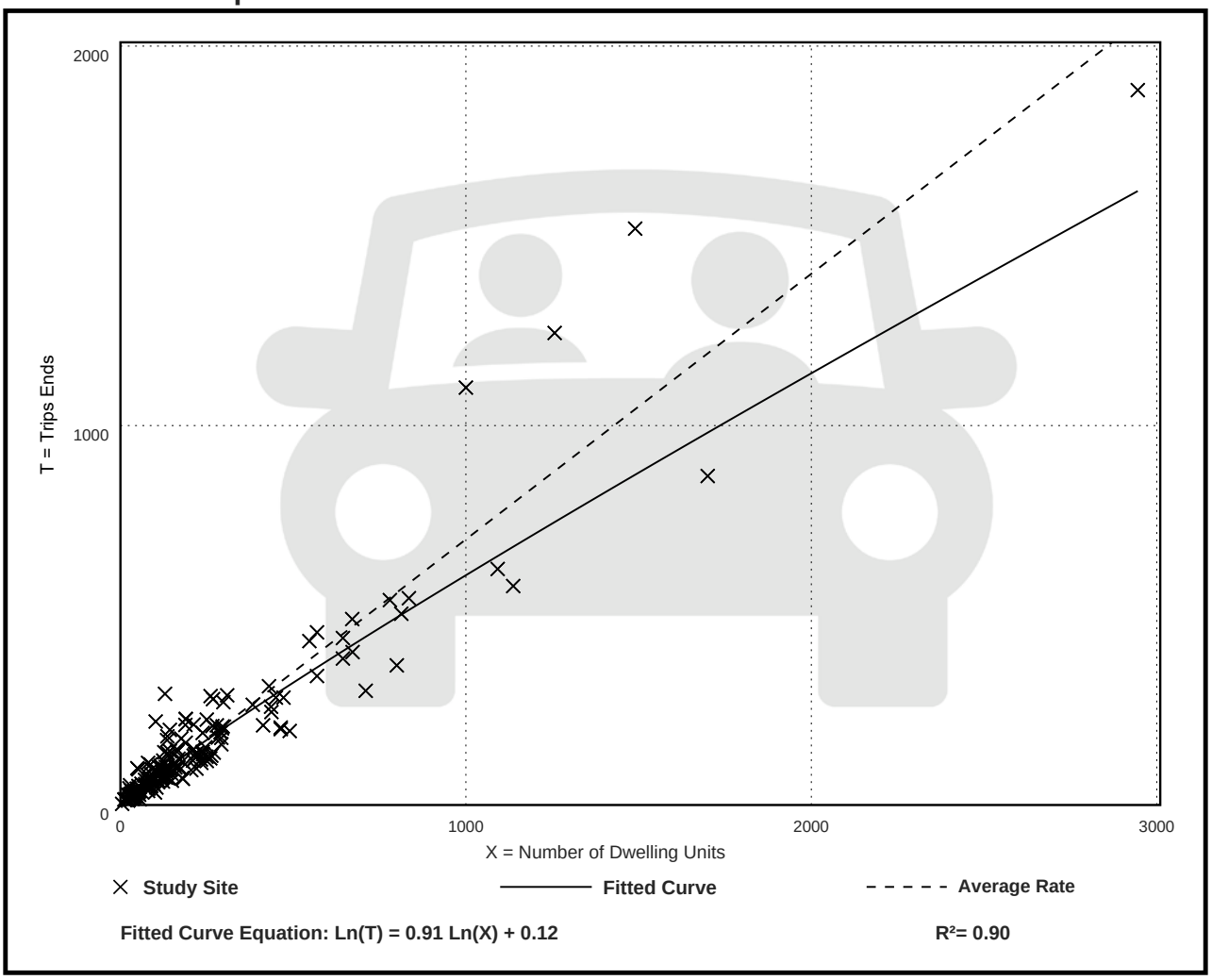
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



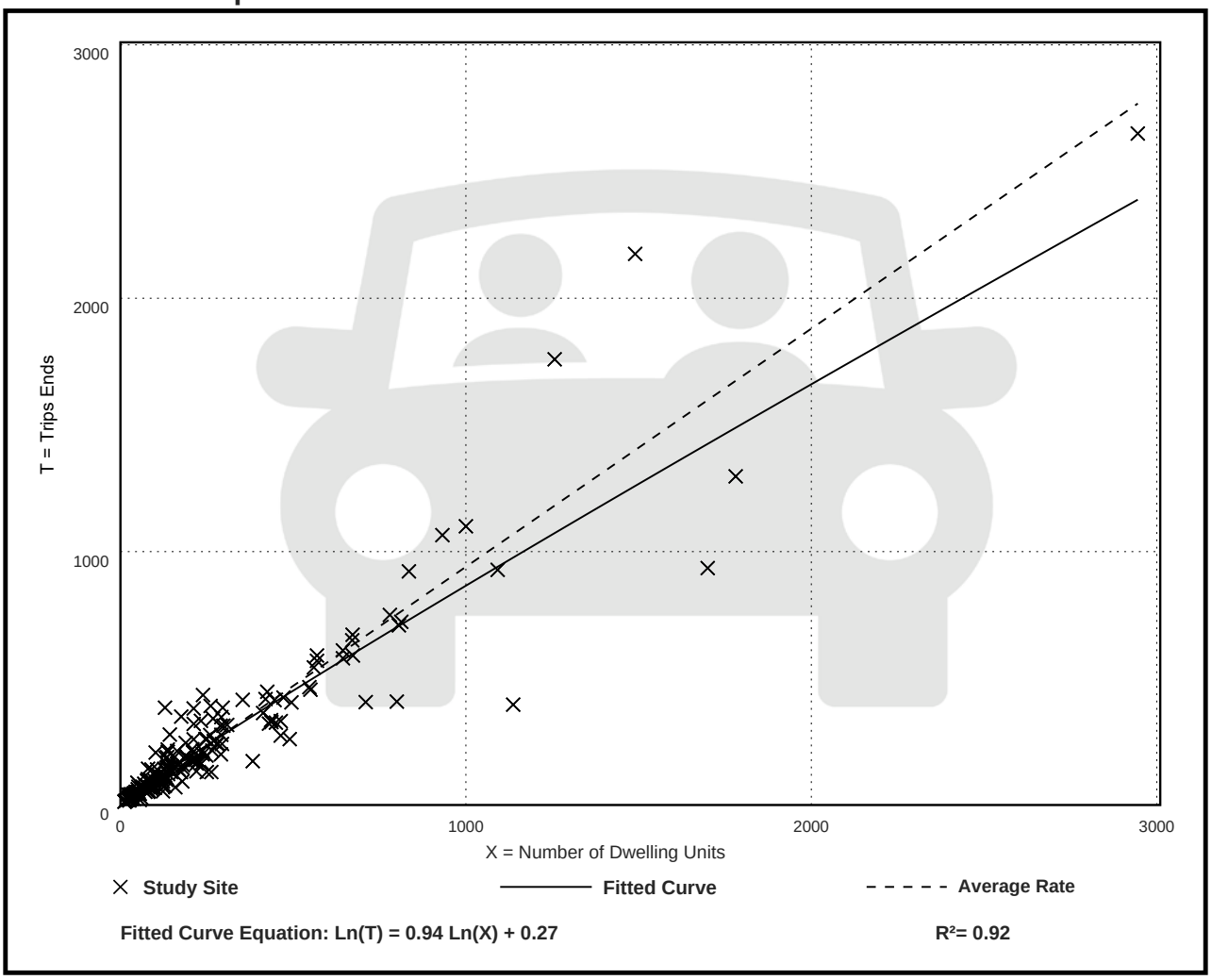
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

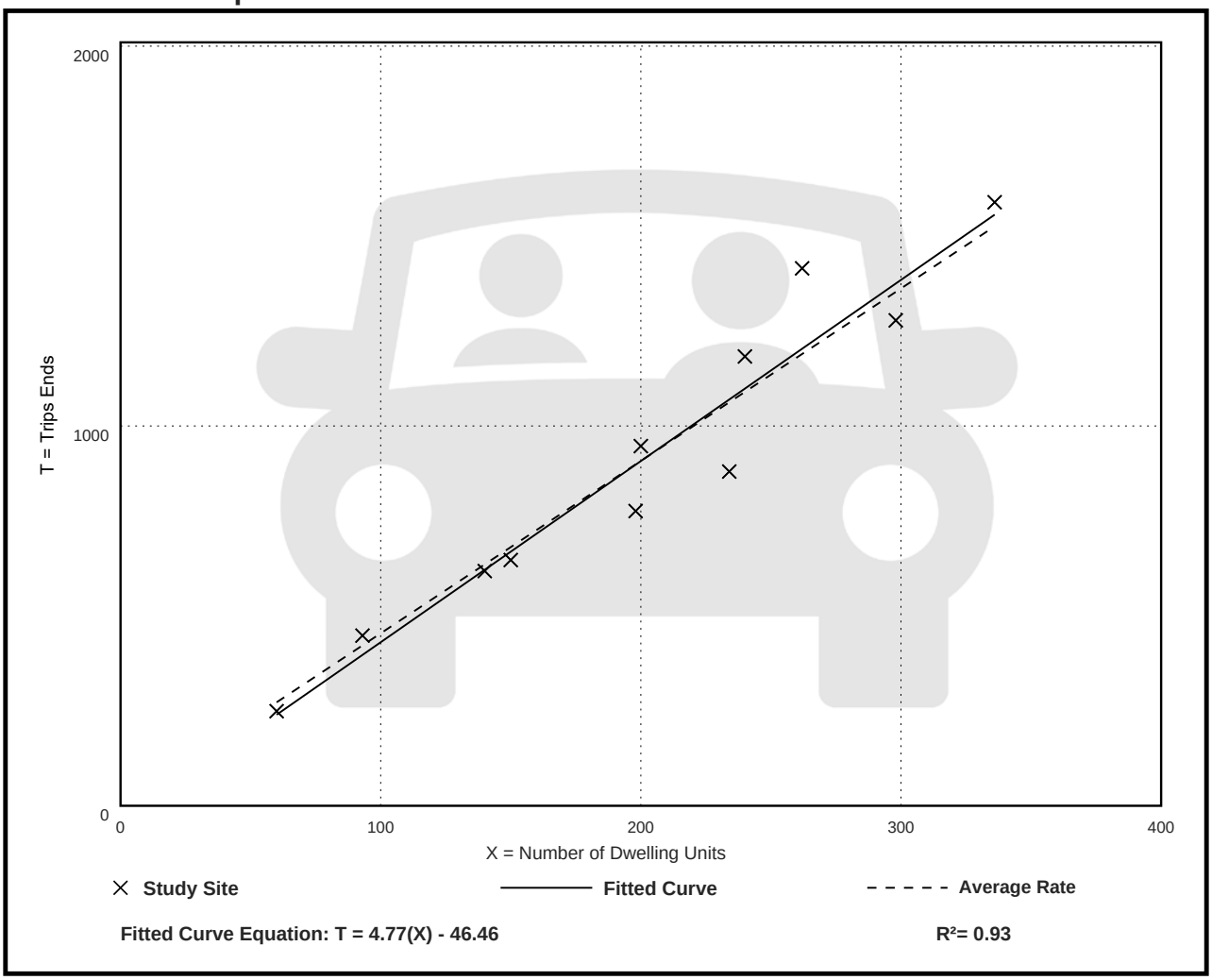
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 11
Avg. Num. of Dwelling Units: 201
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

Data Plot and Equation



Fitted Curve Equation: T = 4.77(X) - 46.46

R^2= 0.93

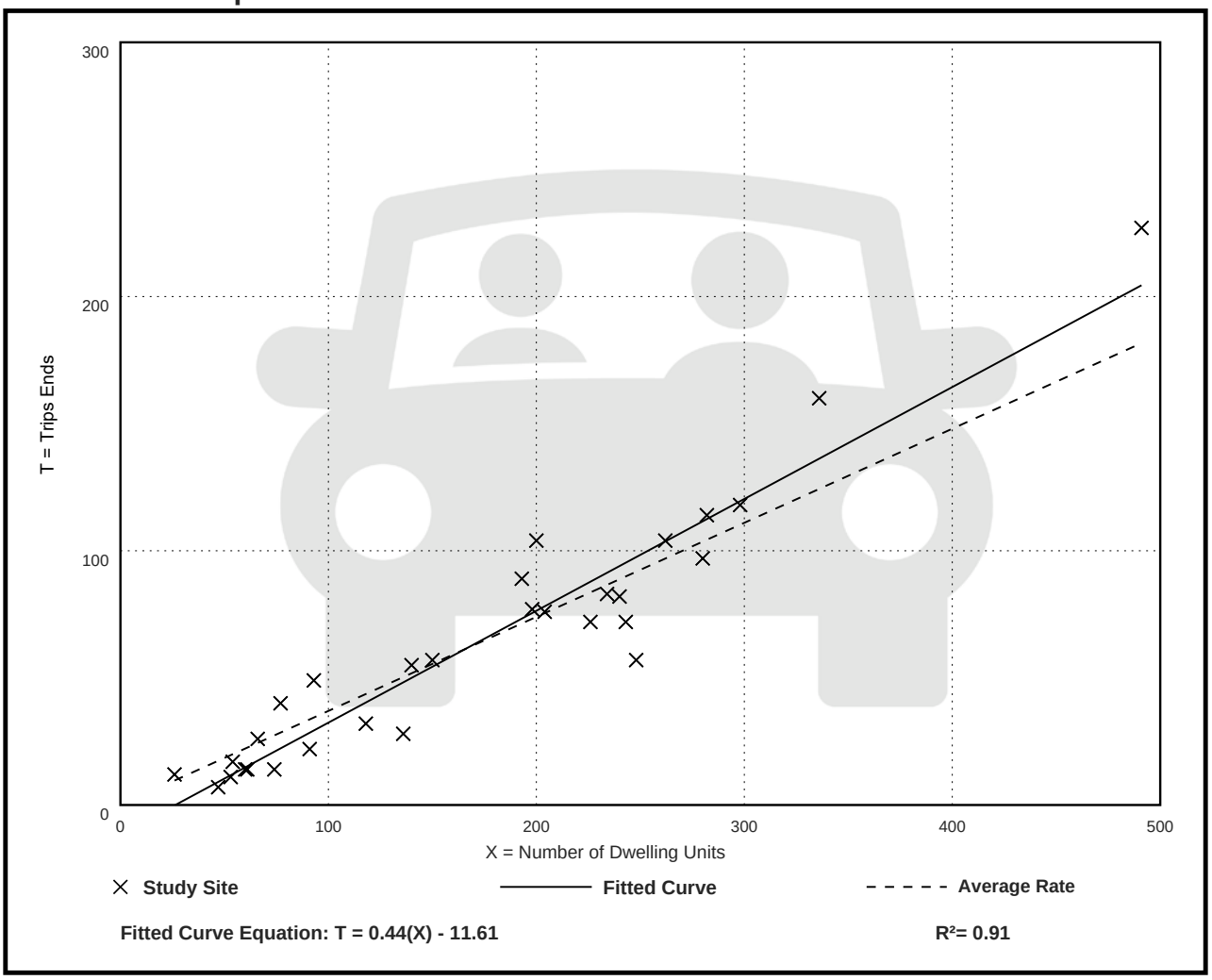
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 30
Avg. Num. of Dwelling Units: 173
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Fitted Curve Equation: T = 0.44(X) - 11.61

R^2= 0.91

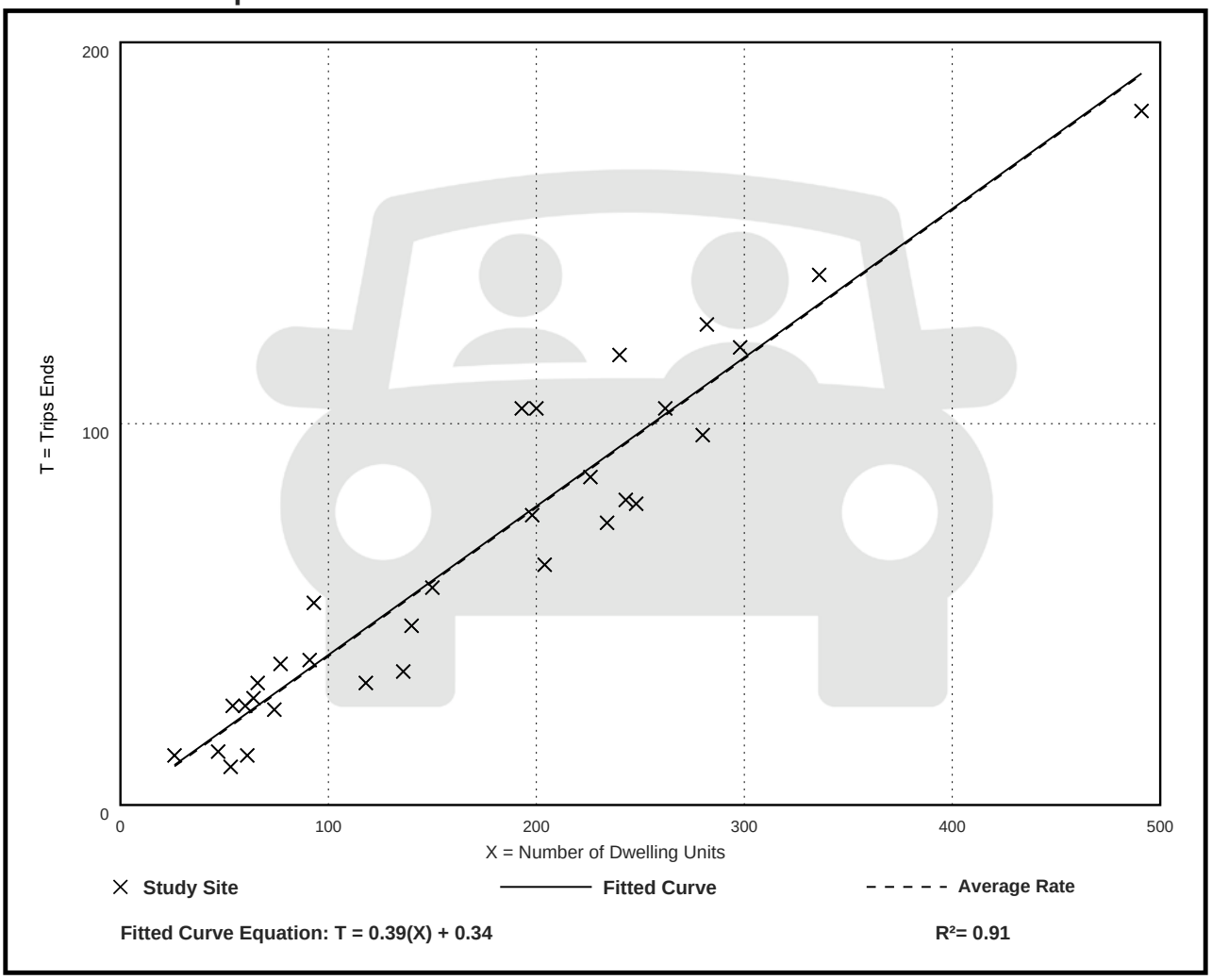
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Land Use: 251
Senior Adult Housing—Single-Family

Description

Senior adult housing—single-family sites are independent living developments that are called various names including retirement communities, age-restricted housing, and active adult communities. The development has a specific age restriction for its residents, typically a minimum of 55 years of age for at least one resident of the household.

Residents in these communities are typically considered active and requiring little to no medical supervision. The percentage of retired residents varies by development. The development may include amenities such as a golf course, swimming pool, 24-hour security, transportation, and common recreational facilities. They generally lack centralized dining and on-site health facilities.

The dwelling units can be either detached or attached. The types of housing types represented by sites in the database include traditional single-family detached homes, patio homes, duplexes, and townhouses. Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

Senior adult housing—multifamily (Land Use 252), congregate care facility (Land Use 253), assisted living (Land Use 254), and continuing care retirement community (Land Use 255) are related land uses.

Additional Data

Caution should be used when applying trip rates for this land use as it may contain a wide variety of studies ranging from communities with very active, working residents to communities with older, retired residents. As more data become available, consideration will be given to future stratification of this land use.

Many factors affected the trip rates for detached senior adult housing. Factors such as the average age of residents, development location and size, affluence of residents, employment status, and vehicular access should be taken into consideration when conducting an analysis. Some developments were located within close proximity to medical facilities, restaurants, shopping centers, banks, and recreational activities.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For the six sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 98 percent of the units were occupied.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, Maryland, New Jersey, New York, Pennsylvania, Virginia, and Washington.

Source Numbers

221, 289, 398, 421, 500, 550, 598, 601, 602, 629, 930, 1015, 1060, 1074

Senior Adult Housing - Single-Family (251)

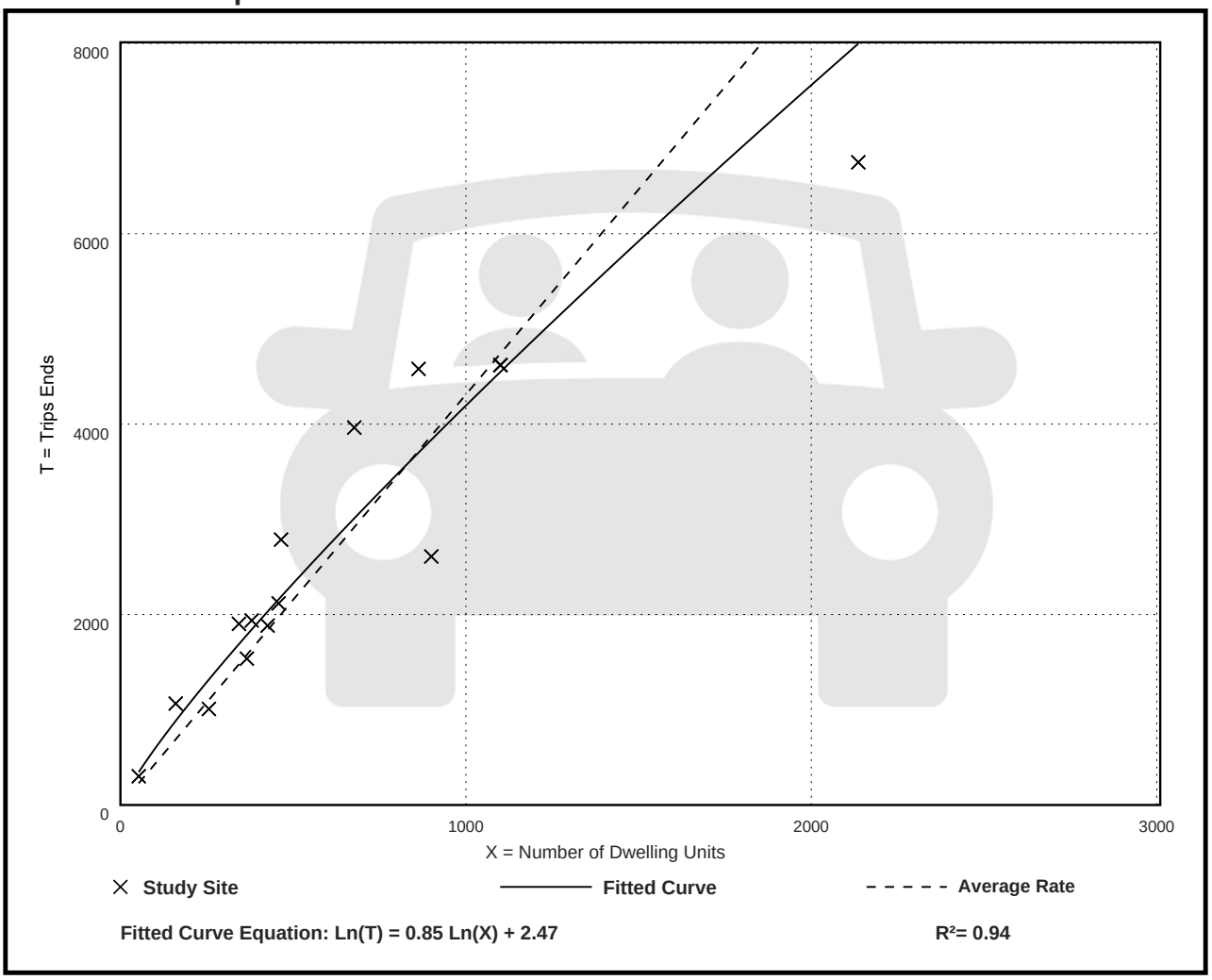
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 15
Avg. Num. of Dwelling Units: 646
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.31	2.90 - 6.66	1.07

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.85 Ln(X) + 2.47

R^2= 0.94

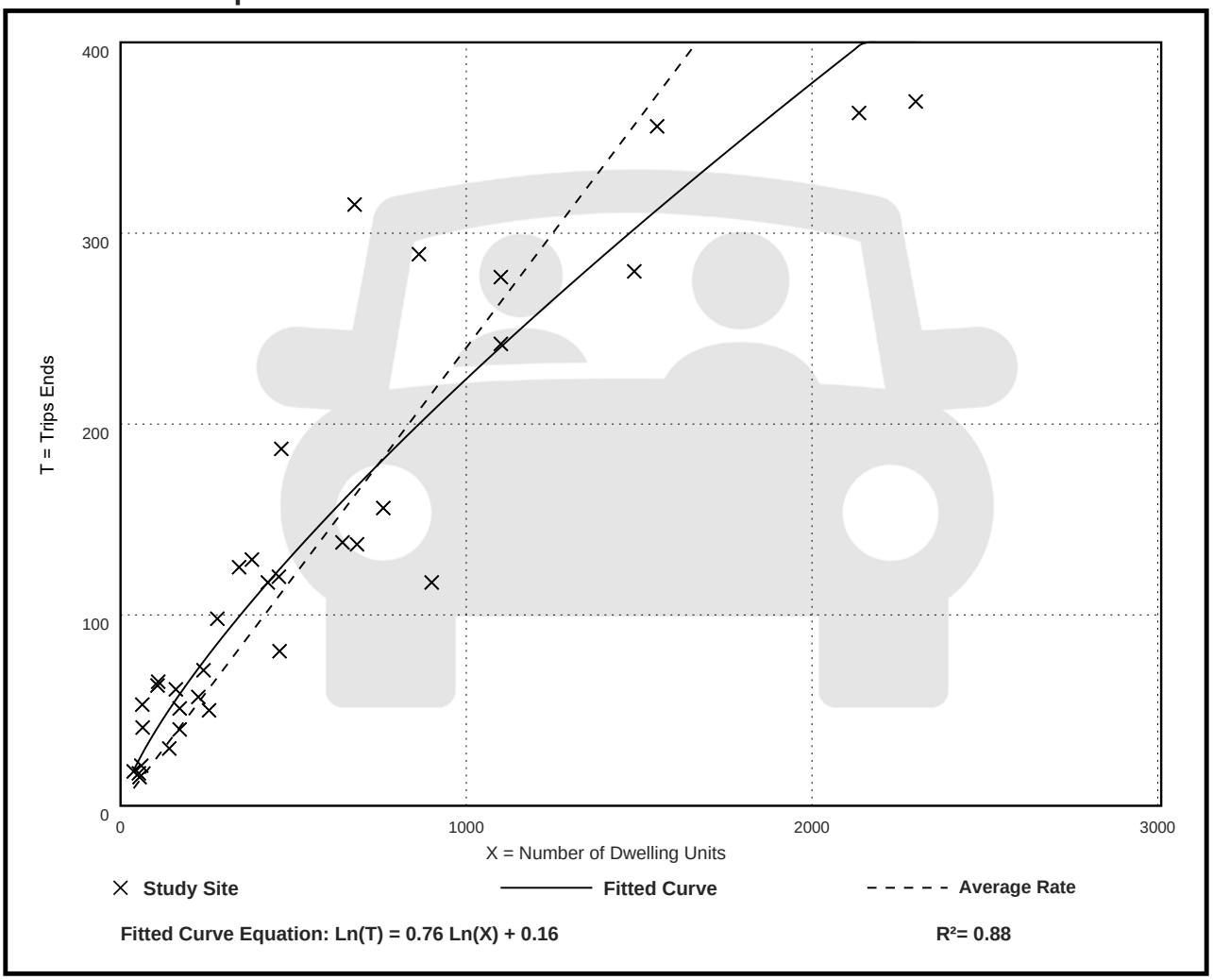
Senior Adult Housing - Single-Family (251)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 34
Avg. Num. of Dwelling Units: 557
Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.24	0.13 - 0.84	0.10

Data Plot and Equation



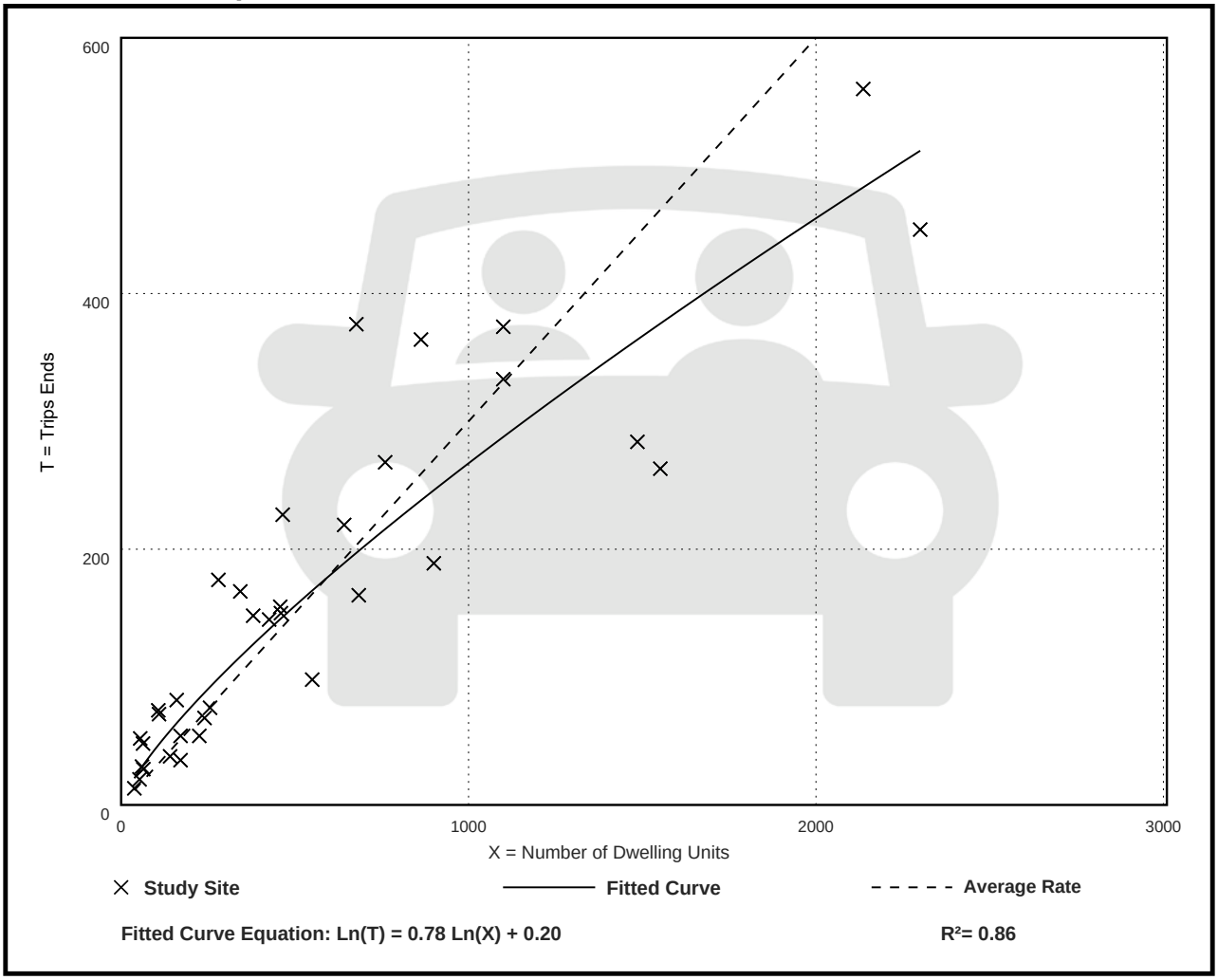
Senior Adult Housing - Single-Family (251)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 35
Avg. Num. of Dwelling Units: 556
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.30	0.17 - 0.95	0.12

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.78 Ln(X) + 0.20

R^2= 0.86

Land Use: 310
Hotel

Description

A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities. A hotel typically provides a swimming pool or another recreational facility such as a fitness room. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

Additional Data

Twenty-five studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 82 percent.

Some properties in this land use provide guest transportation services (e.g., airport shuttle, limousine service, golf course shuttle service) which may have an impact on the overall trip generation rates.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, District of Columbia, Florida, Georgia, Indiana, Minnesota, New York, Ontario (CAN), Pennsylvania, South Dakota, Texas, Vermont, Virginia, and Washington.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Trip generation at a hotel may be related to the presence of supporting facilities such as convention facilities, restaurants, meeting/banquet space, and retail facilities. Future data submissions should specify the presence of these amenities. Reporting the level of activity at the supporting facilities such as full, empty, partially active, number of people attending a meeting/banquet during observation may also be useful in further analysis of this land use.

Source Numbers

170, 260, 262, 277, 280, 301, 306, 357, 422, 507, 577, 728, 867, 872, 925, 951, 1009, 1021, 1026, 1046

Hotel
(310)

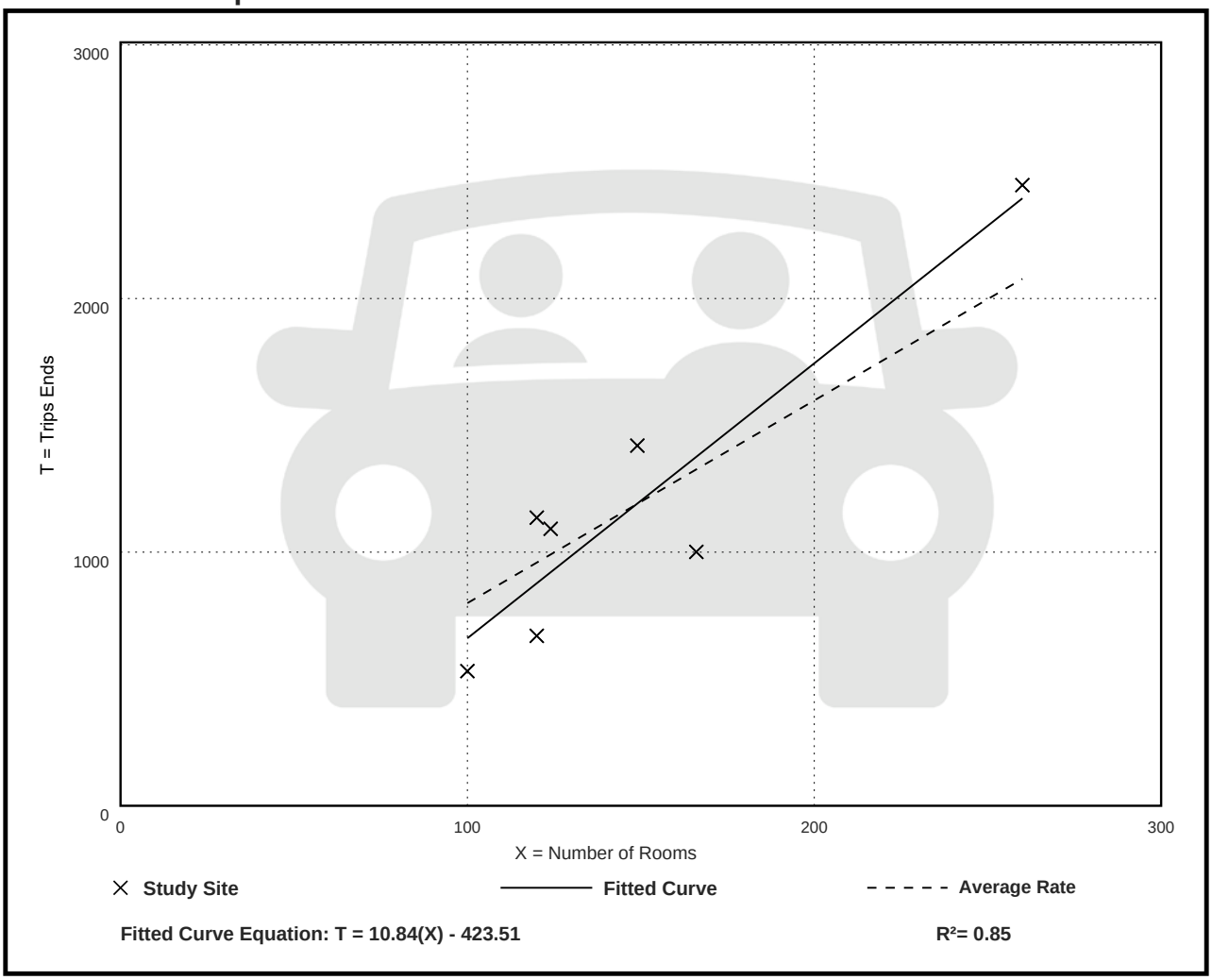
Vehicle Trip Ends vs: Rooms
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 7
Avg. Num. of Rooms: 148
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
7.99	5.31 - 9.53	1.92

Data Plot and Equation



Fitted Curve Equation: T = 10.84(X) - 423.51

R^2= 0.85

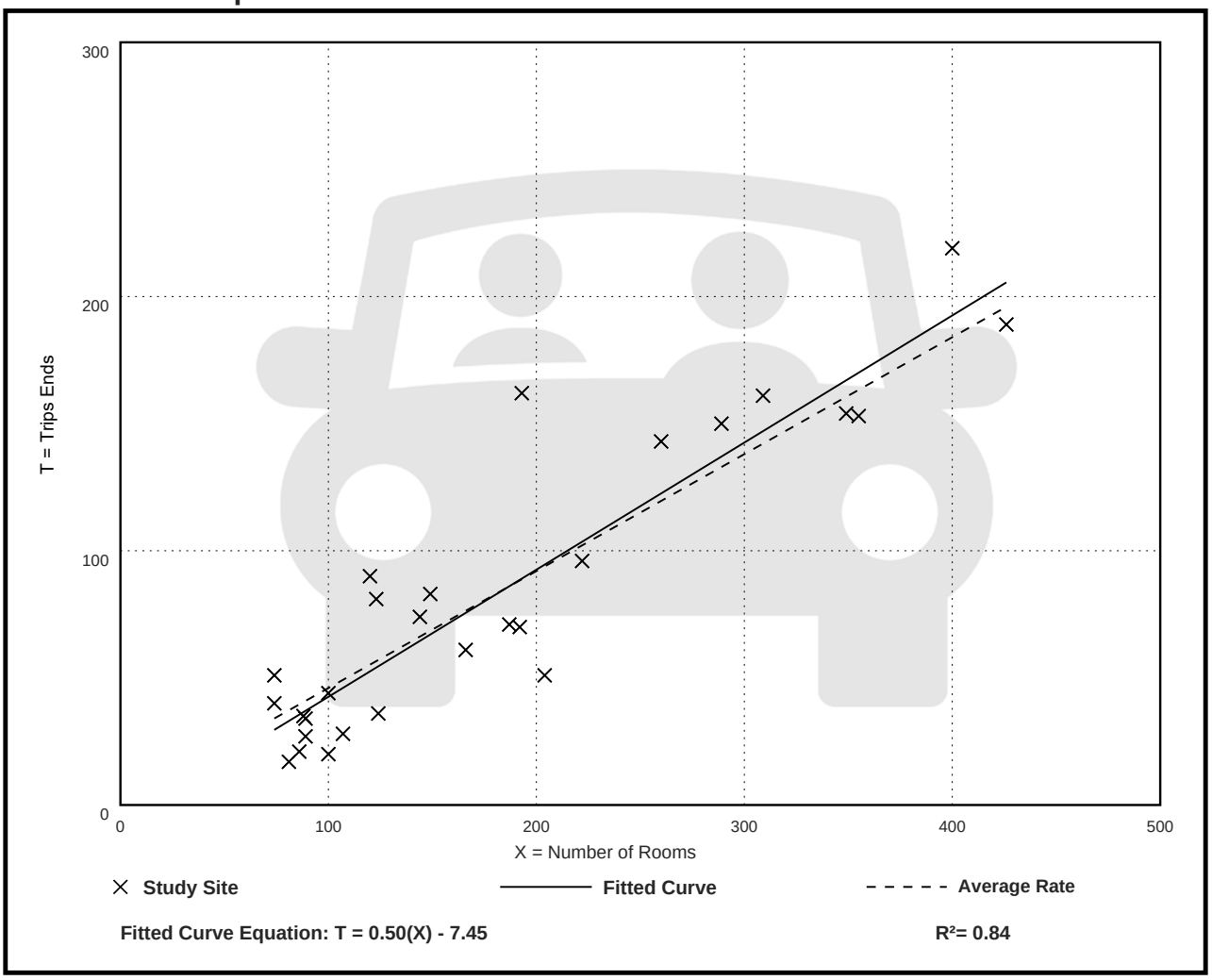
Hotel
(310)

Vehicle Trip Ends vs: Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 28
Avg. Num. of Rooms: 182
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.46	0.20 - 0.84	0.14

Data Plot and Equation



Fitted Curve Equation: T = 0.50(X) - 7.45

R^2= 0.84

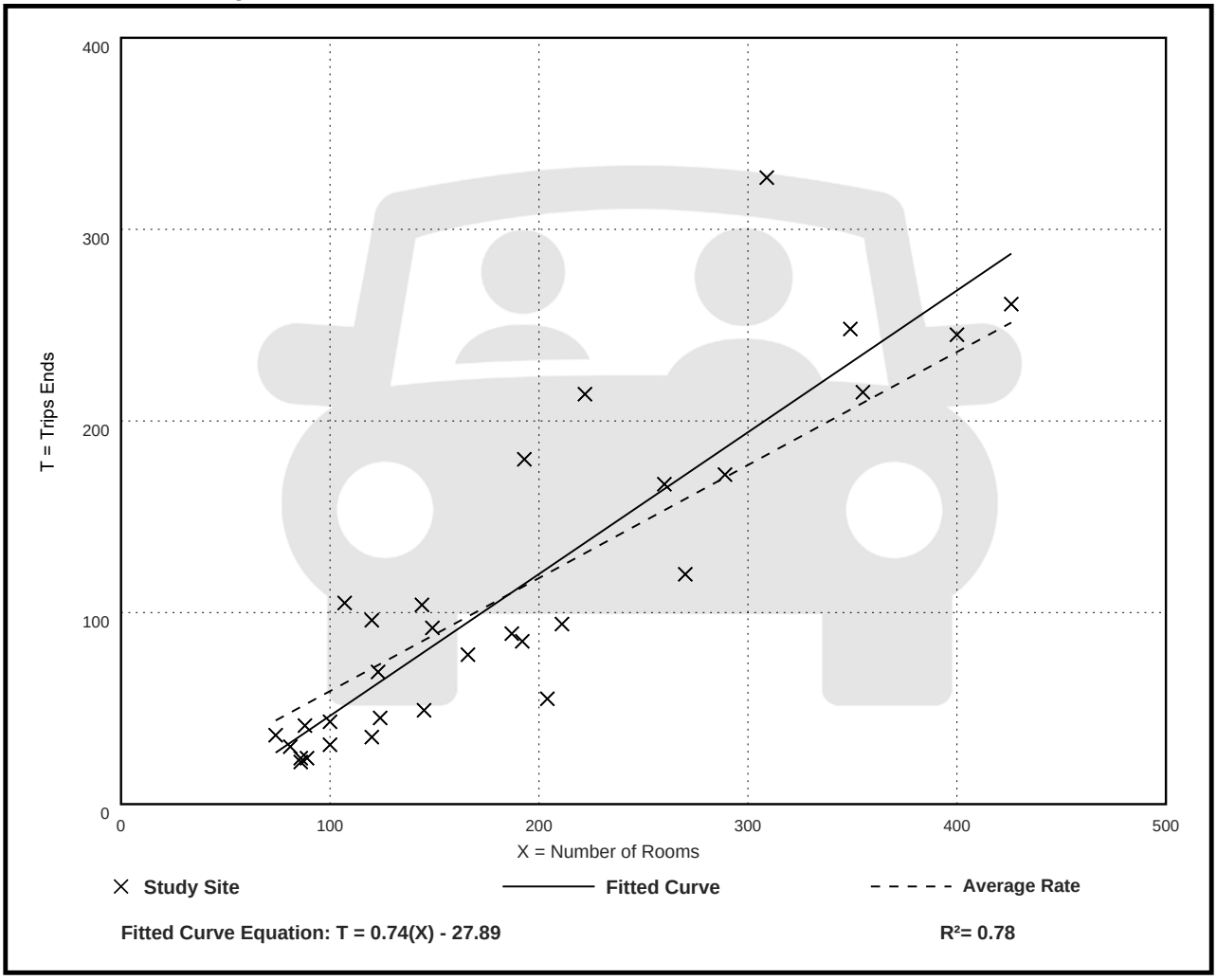
Hotel
(310)

Vehicle Trip Ends vs: Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Rooms: 186
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.59	0.26 - 1.06	0.22

Data Plot and Equation



Land Use 525
High School

Description

A high school is a public school that serves students who have completed middle or junior high school. Middle school/junior high school (Land Use 522), private school (K-12) (Land Use 532), private high school (Land Use (534), and charter school (K-12) (Land Use 538) are related uses.

Additional Data

The trip generation for weekend time periods varied considerably; therefore, caution should be used when applying weekend statistics. Information describing the weekend activities conducted at the high schools was not available.

The percentage of students at the sites who were transported to school via bus varied considerably. Due to the varied transit and school bus usage at these sites, it is desirable that future studies include additional detail on the percentage of students who were bused to school and the percentage who were dropped off and picked up.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Arizona, California, Connecticut, Delaware, Florida, Minnesota, New Jersey, North Carolina, Oregon, Texas, Vermont, Washington, and West Virginia.

Source Numbers

293, 383, 409, 422, 444, 533, 536, 550, 564, 579, 598, 611, 620, 751, 854, 905, 915, 926, 936, 954, 971, 1026, 1048, 1067, 1083

High School
(525)

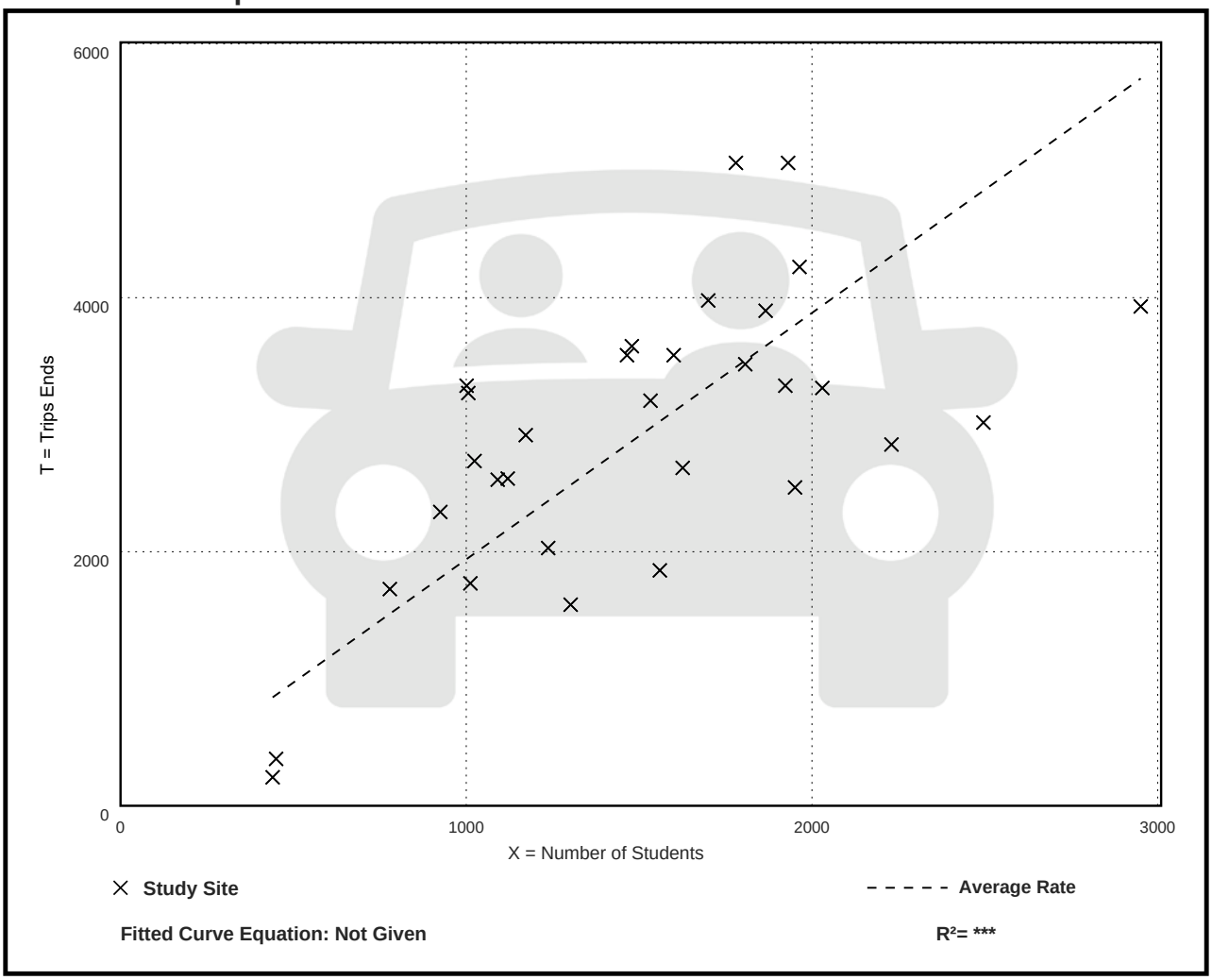
Vehicle Trip Ends vs: Students
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Students: 1498
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
1.94	0.51 - 3.30	0.61

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ***

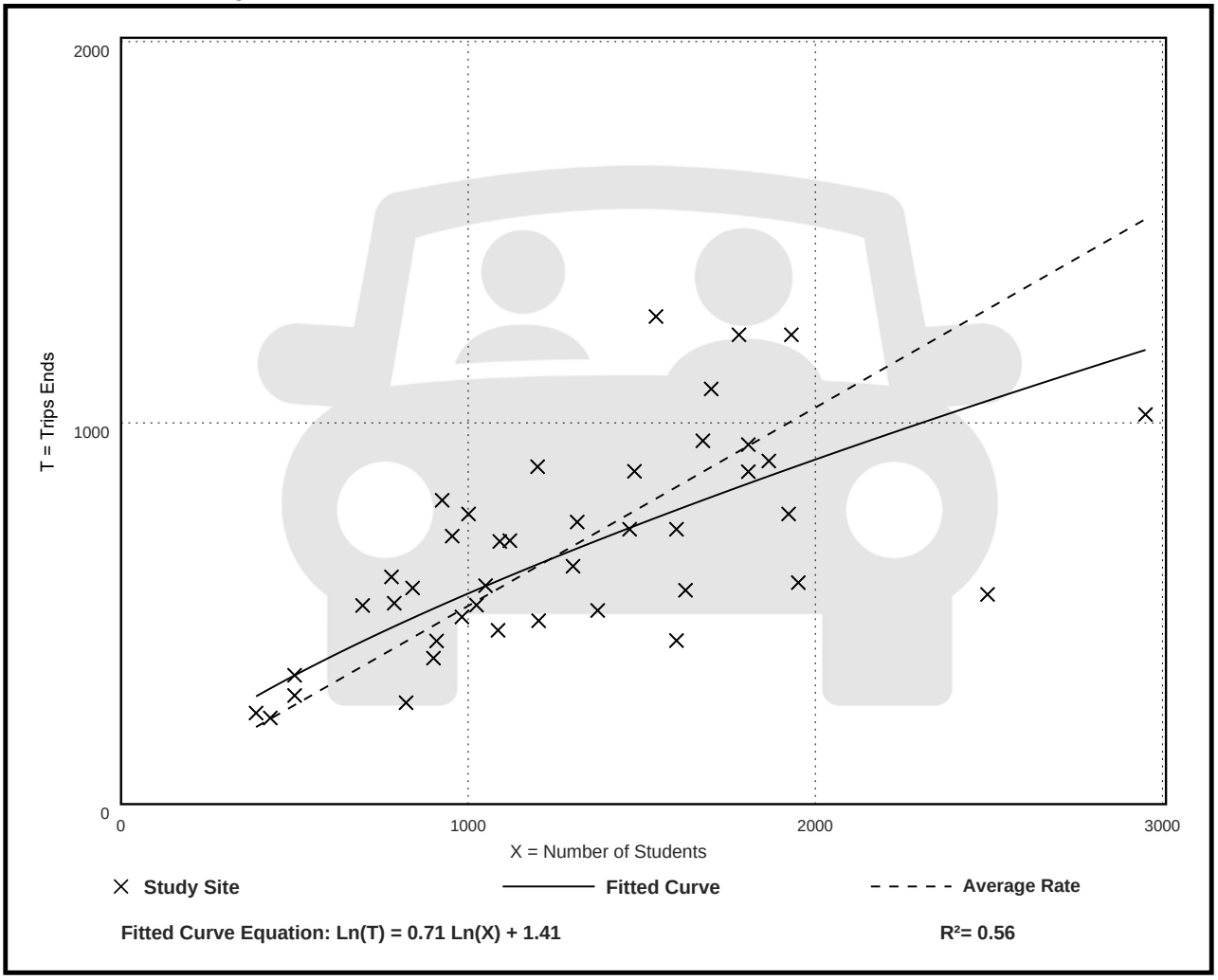
High School
(525)

Vehicle Trip Ends vs: Students
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 42
Avg. Num. of Students: 1295
Directional Distribution: 68% entering, 32% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.52	0.22 - 0.86	0.16

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.71 Ln(X) + 1.41

R^2= 0.56

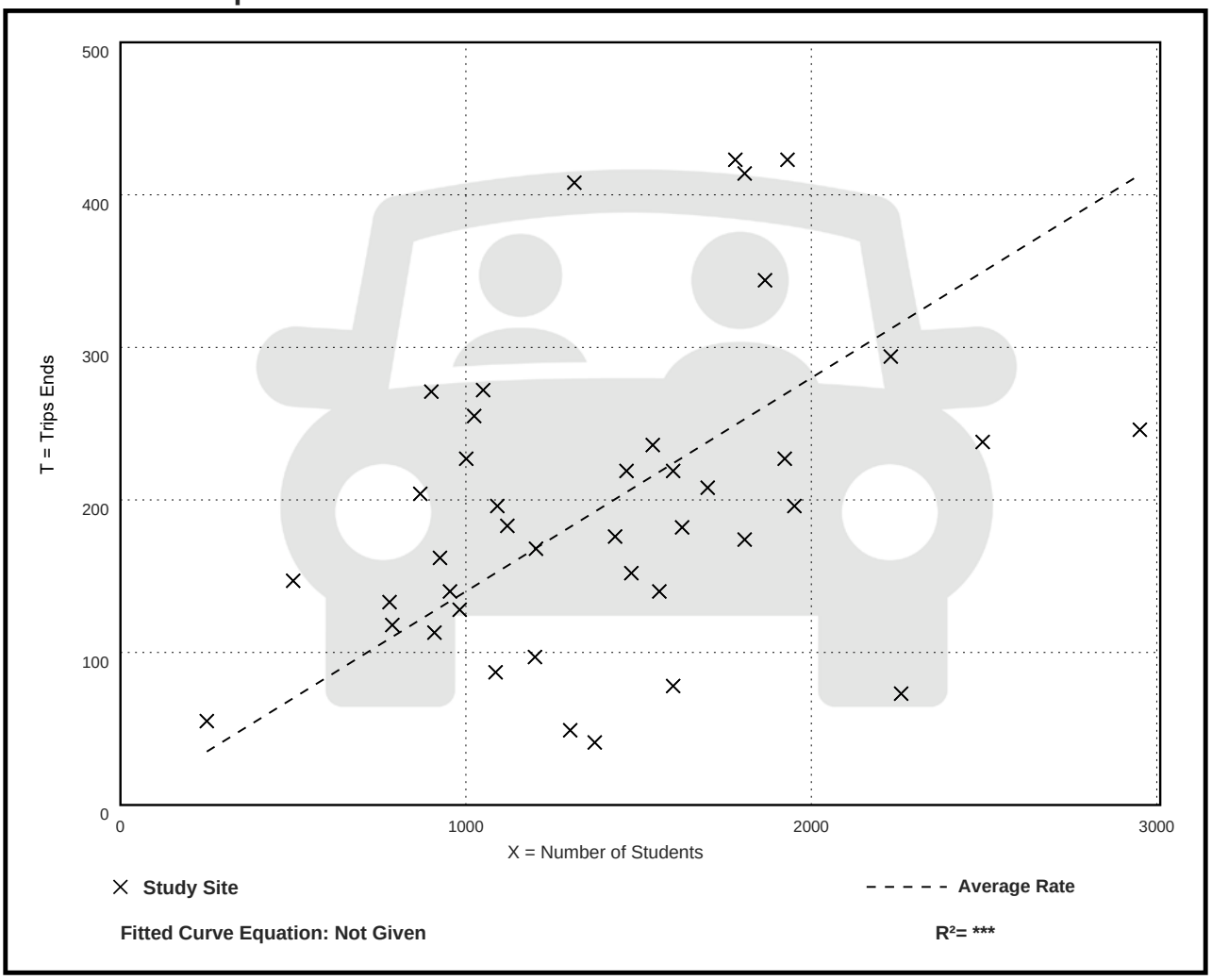
High School
(525)

Vehicle Trip Ends vs: Students
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 41
Avg. Num. of Students: 1405
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.14	0.03 - 0.31	0.07

Data Plot and Equation



Land Use: 710
General Office Building

Description

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

Additional Data

If two or more general office buildings are in close physical proximity (within a close walk) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

For study sites with reported gross floor area and employees, an average employee density of 3.3 employees per 1,000 square feet GFA (or roughly 300 square feet per employee) has been consistent through the 1980s, 1990s, and 2000s. No sites counted in the 2010s reported both GFA and employees.

The average building occupancy varies considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected are as follows:

- 2.8 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 2.9 during Weekday, AM Peak Hour of Generator
- 2.9 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 3.0 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.5 during Weekday, AM Peak Hour of Generator
- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.5 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.3 during Weekday, AM Peak Hour of Generator
- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.4 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ontario (CAN)Pennsylvania, Texas, Utah, Virginia, and Washington.

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061

General Office Building
(710)

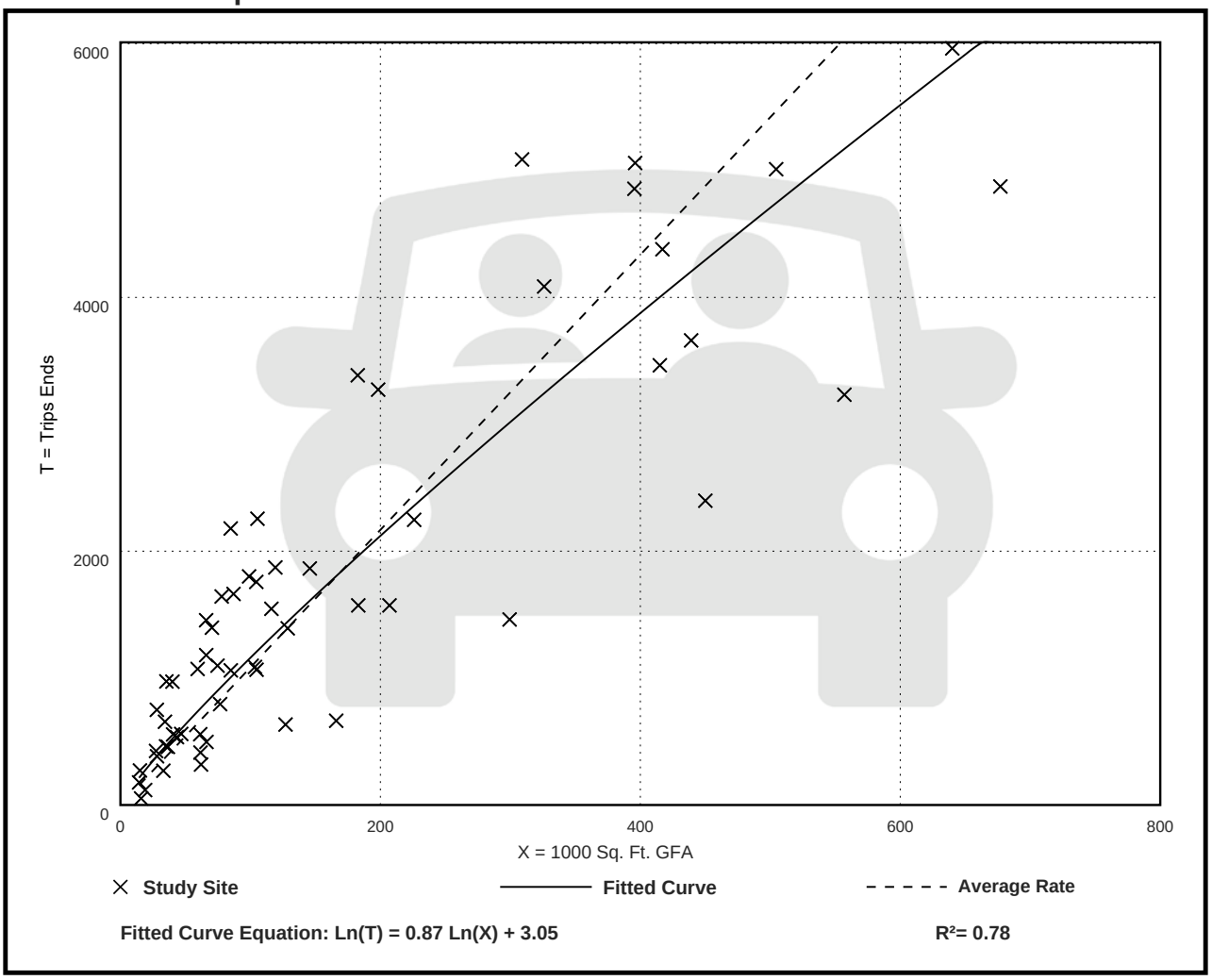
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.87 Ln(X) + 3.05

R^2= 0.78

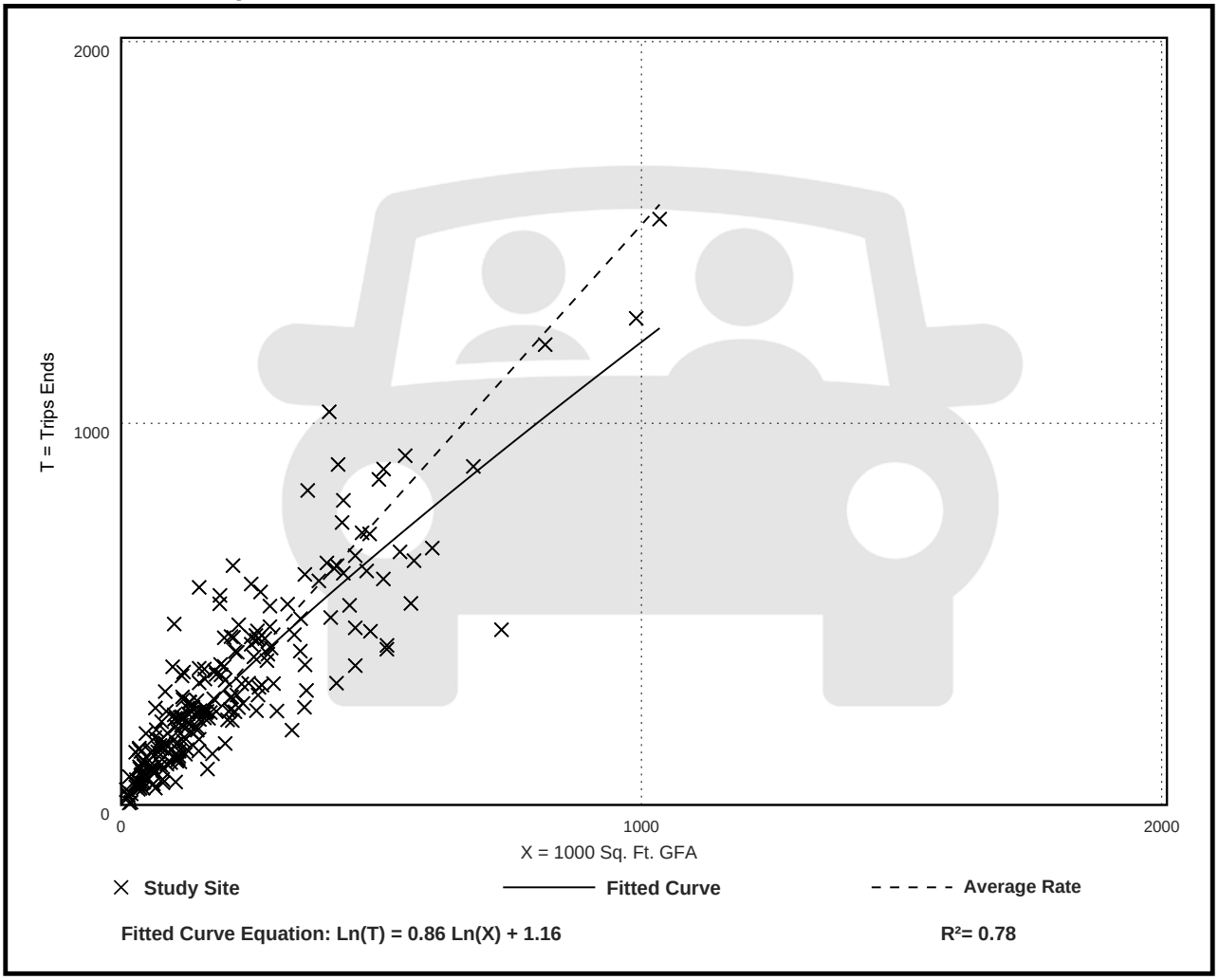
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.86 Ln(X) + 1.16

R^2= 0.78

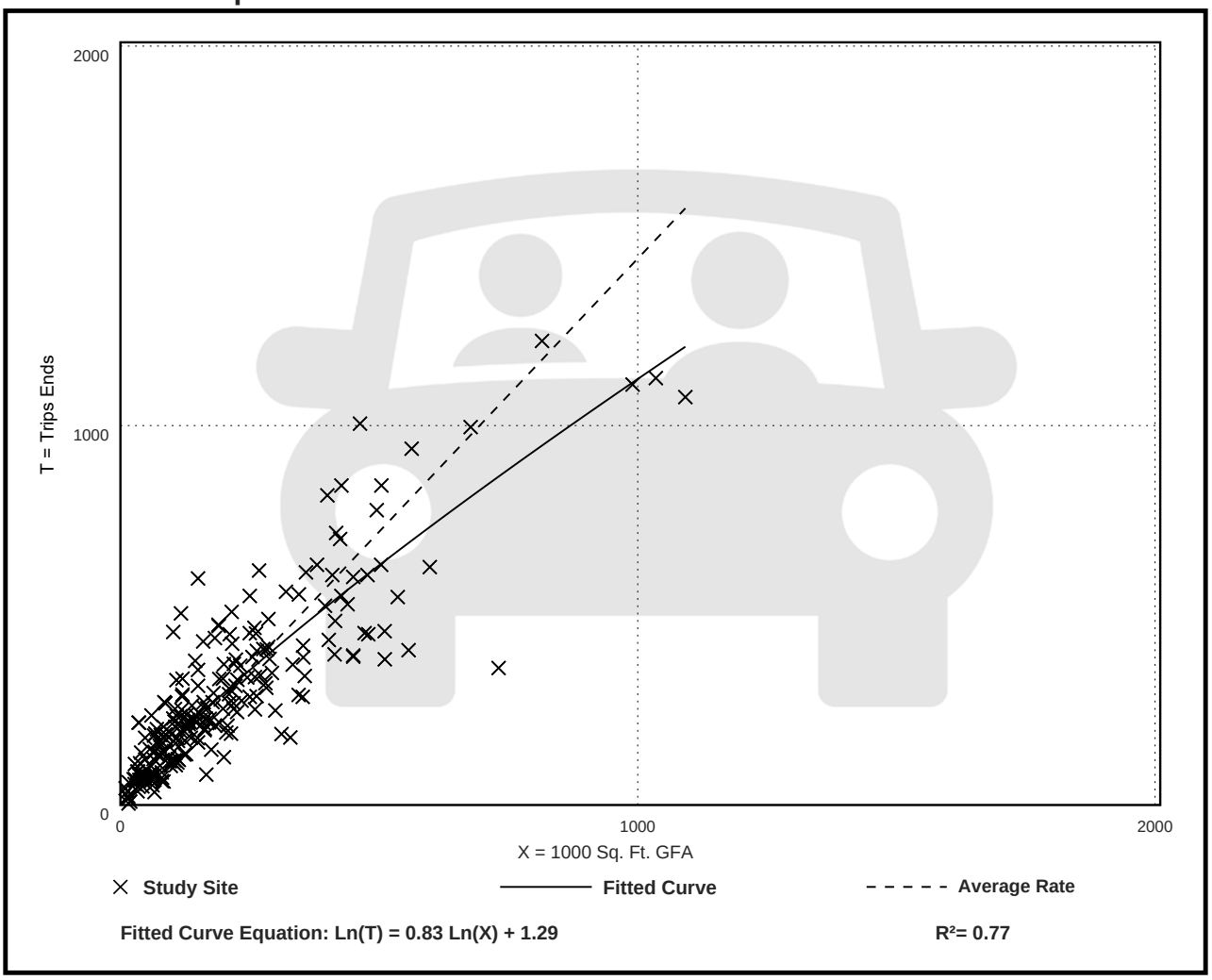
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.83 Ln(X) + 1.29

R^2= 0.77

Land Use: 820
Shopping Center (>150k)

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has at least 150,000 square feet of gross leasable area (GLA). It often has more than one anchor store. Various names can be assigned to a shopping center within this size range, depending on its specific size and tenants, such as community center, regional center, superregional center, fashion center, and power center.

A shopping center of this size typically contains more than retail merchandising facilities. Office space, a movie theater, restaurants, a post office, banks, a health club, and recreational facilities are common tenants.

A shopping center of this size can be enclosed or open-air. The vehicle trips generated at a shopping center are based upon the total GLA of the center. In the case of a smaller center without an enclosed mall or peripheral buildings, the GLA is the same as the gross floor area of the building.

The 150,000 square feet GLA threshold value between community/regional shopping center and shopping plaza (Land Use 821) is based on an examination of trip generation data. For a shopping plaza that is smaller than the threshold value, the presence or absence of a supermarket within the plaza has a measurable effect on site trip generation. For a shopping center that is larger than the threshold value, the trips generated by its other major tenants mask any effects of the presence or absence of an on-site supermarket.

Shopping plaza (40-150k) (Land Use 821), strip retail plaza (<40k) (Land Use 822), and factory outlet center (Land Use 823) are related uses.

Additional Data

Many shopping centers—in addition to the integrated unit of shops in one building or enclosed around a mall—include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied include peripheral buildings, it can be assumed that some of the data show their effect.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky,

Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

Source Numbers

77, 110, 154, 156, 159, 190, 199, 202, 204, 213, 251, 269, 294, 295, 299, 304, 305, 307, 308, 309, 311, 314, 315, 316, 317, 319, 365, 385, 404, 414, 423, 442, 446, 562, 629, 702, 715, 728, 868, 871, 880, 899, 912, 926, 946, 962, 973, 974, 978, 1034, 1040, 1067

Shopping Center (>150k)
(820)

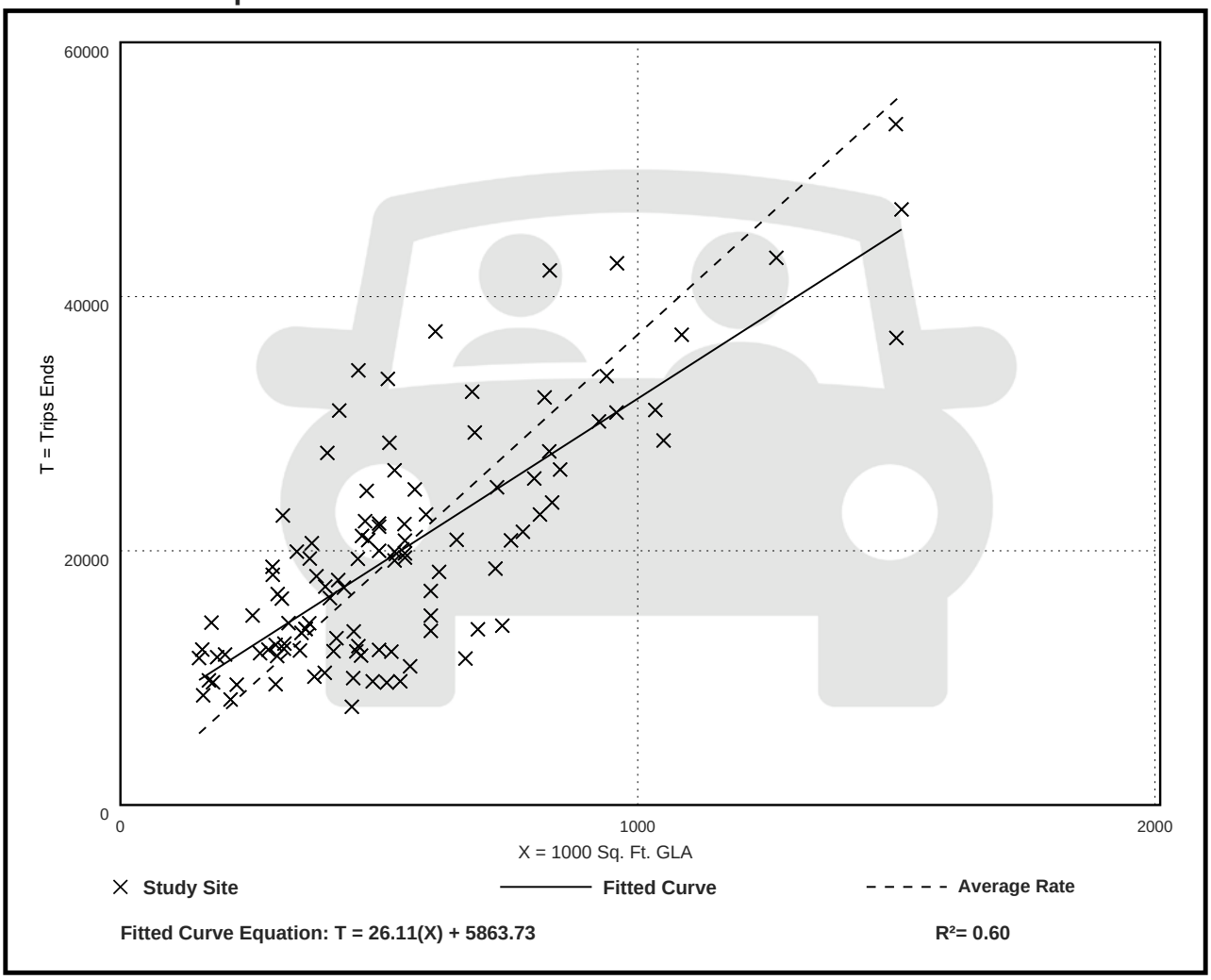
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 108
Avg. 1000 Sq. Ft. GLA: 538
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.01	17.27 - 81.53	12.79

Data Plot and Equation



Fitted Curve Equation: T = 26.11(X) + 5863.73

R^2= 0.60

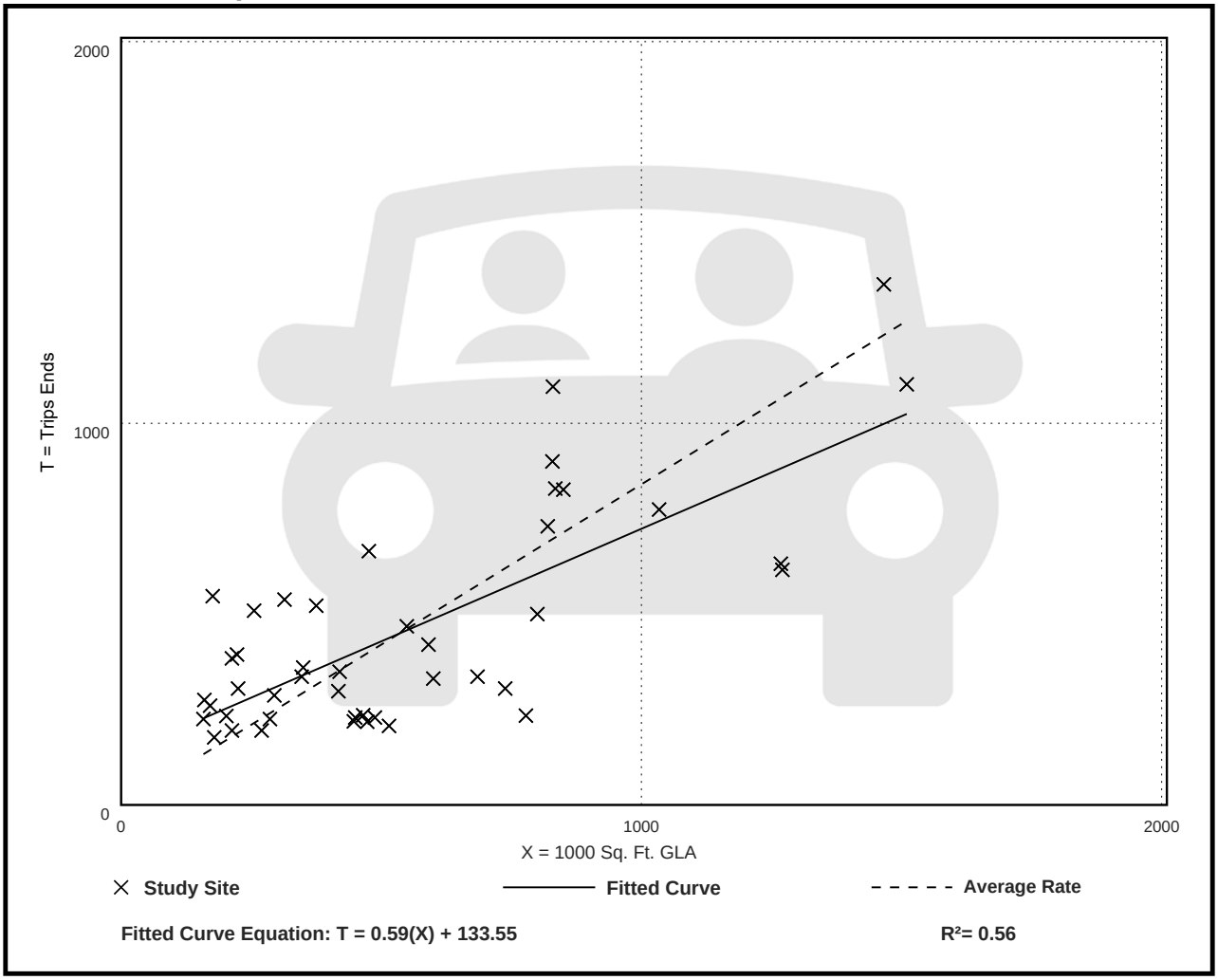
Shopping Center (>150k)
(820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 44
Avg. 1000 Sq. Ft. GLA: 546
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.84	0.30 - 3.11	0.42

Data Plot and Equation



Fitted Curve Equation: T = 0.59(X) + 133.55

R^2= 0.56

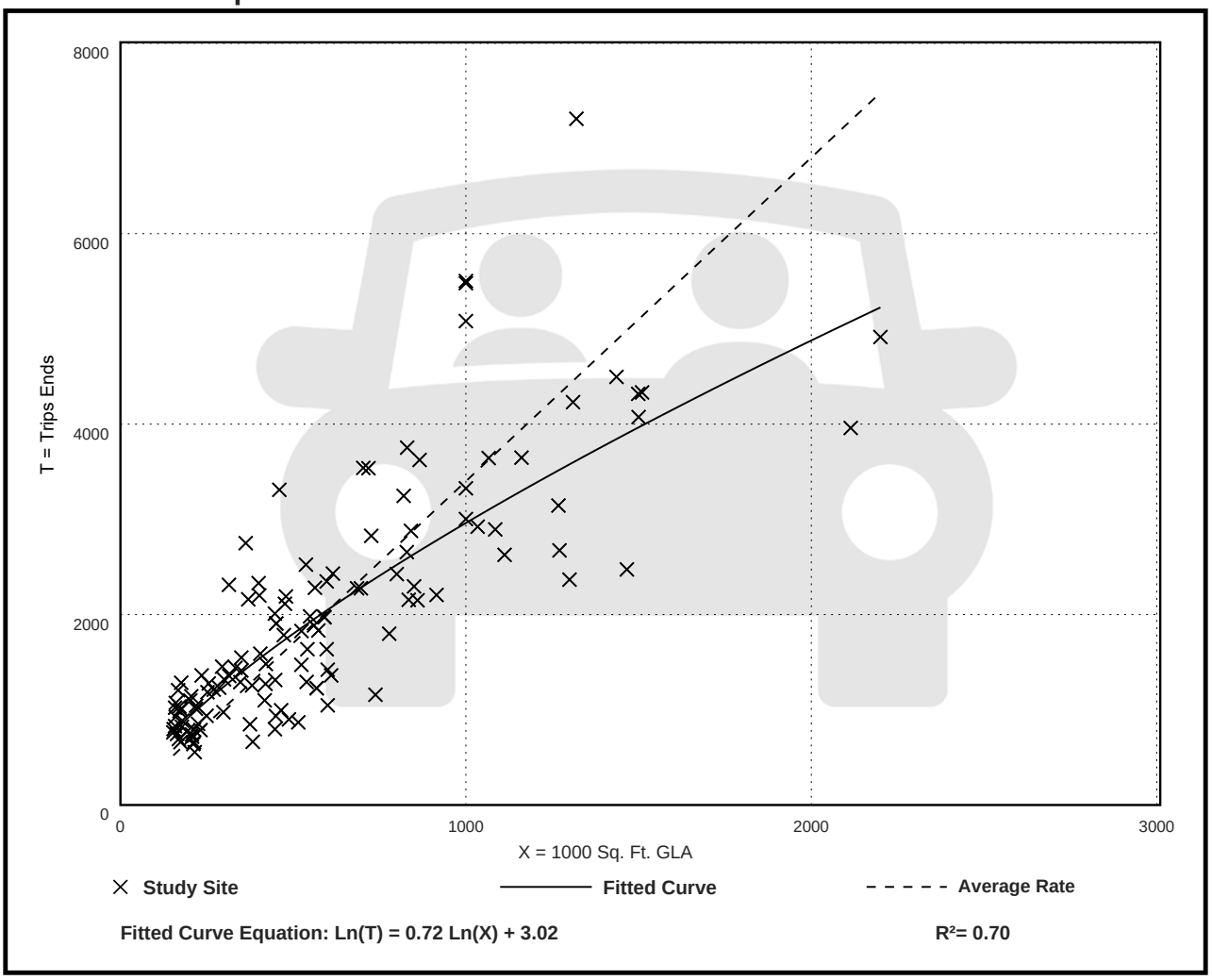
Shopping Center (>150k)
(820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 126
Avg. 1000 Sq. Ft. GLA: 581
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.40	1.57 - 7.58	1.26

Data Plot and Equation



Land Use: 822
Strip Retail Plaza (<40k)

Description

A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). Because a strip retail plaza is open-air, the GLA is the same as the gross floor area of the building.

The 40,000 square feet GFA threshold between strip retail plaza and shopping plaza (Land Use 821) was selected based on an examination of the overall shopping center/plaza database. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA.

Shopping center (>150k) (Land use 820), shopping plaza (40-150k) (Land Use 821), and factory outlet center (Land Use 823) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, New Jersey, Ontario (CAN), South Dakota, Vermont, Washington, and Wisconsin.

Source Numbers

304, 358, 423, 428, 437, 507, 715, 728, 936, 960, 961, 974, 1009

Strip Retail Plaza (<40k)
(822)

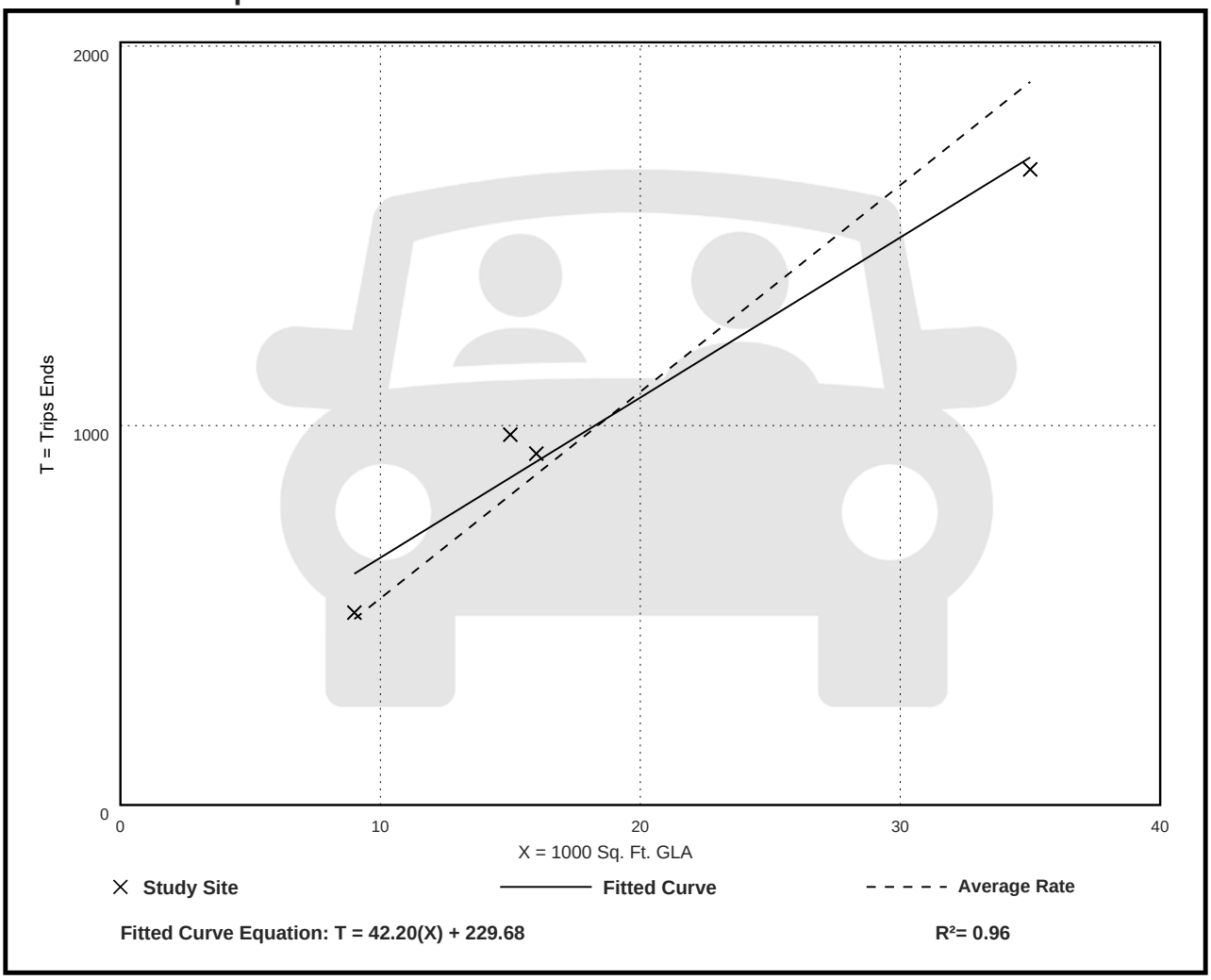
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. 1000 Sq. Ft. GLA: 19
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation



Fitted Curve Equation: T = 42.20(X) + 229.68

R^2= 0.96

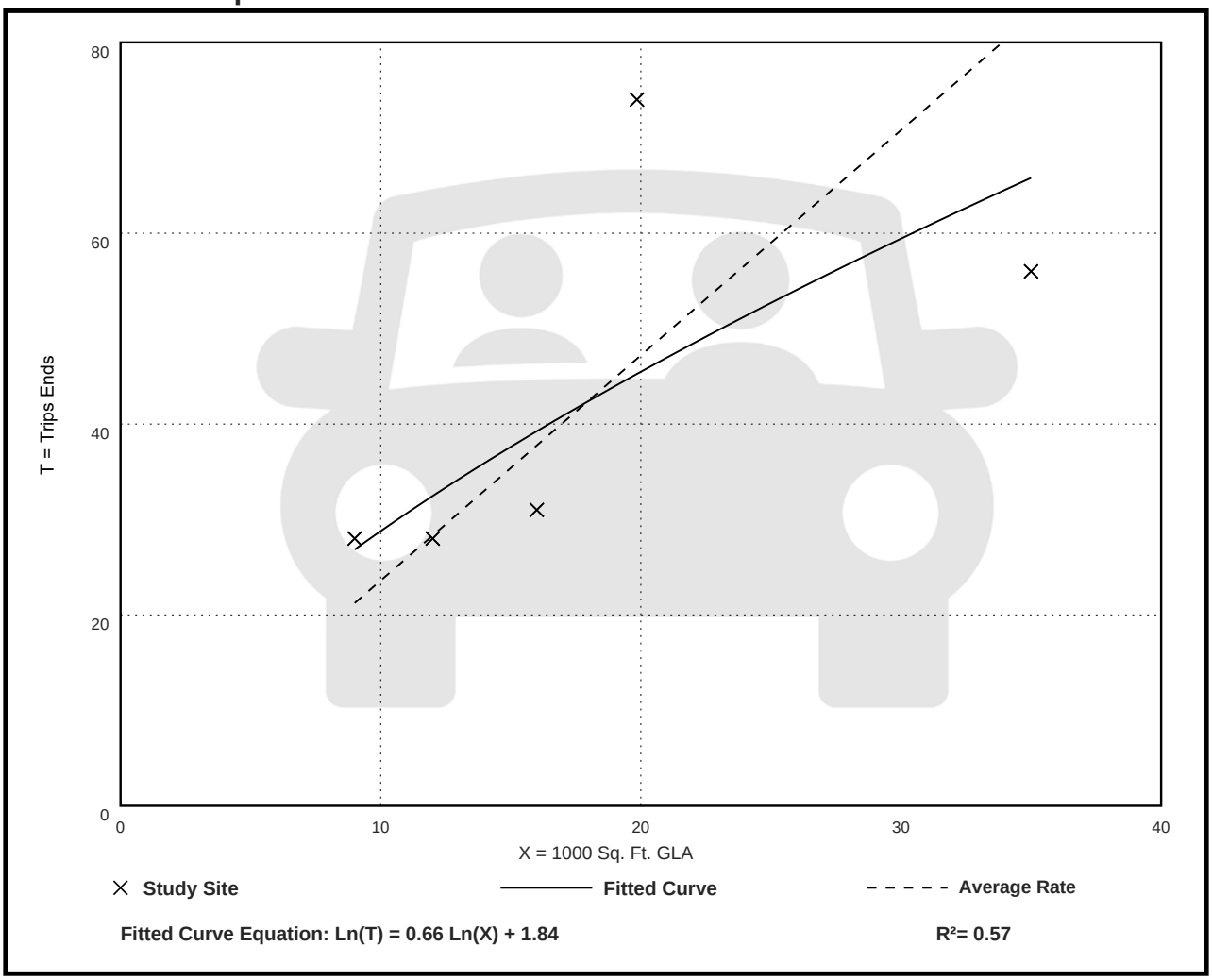
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GLA: 18
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.66 Ln(X) + 1.84

R^2= 0.57

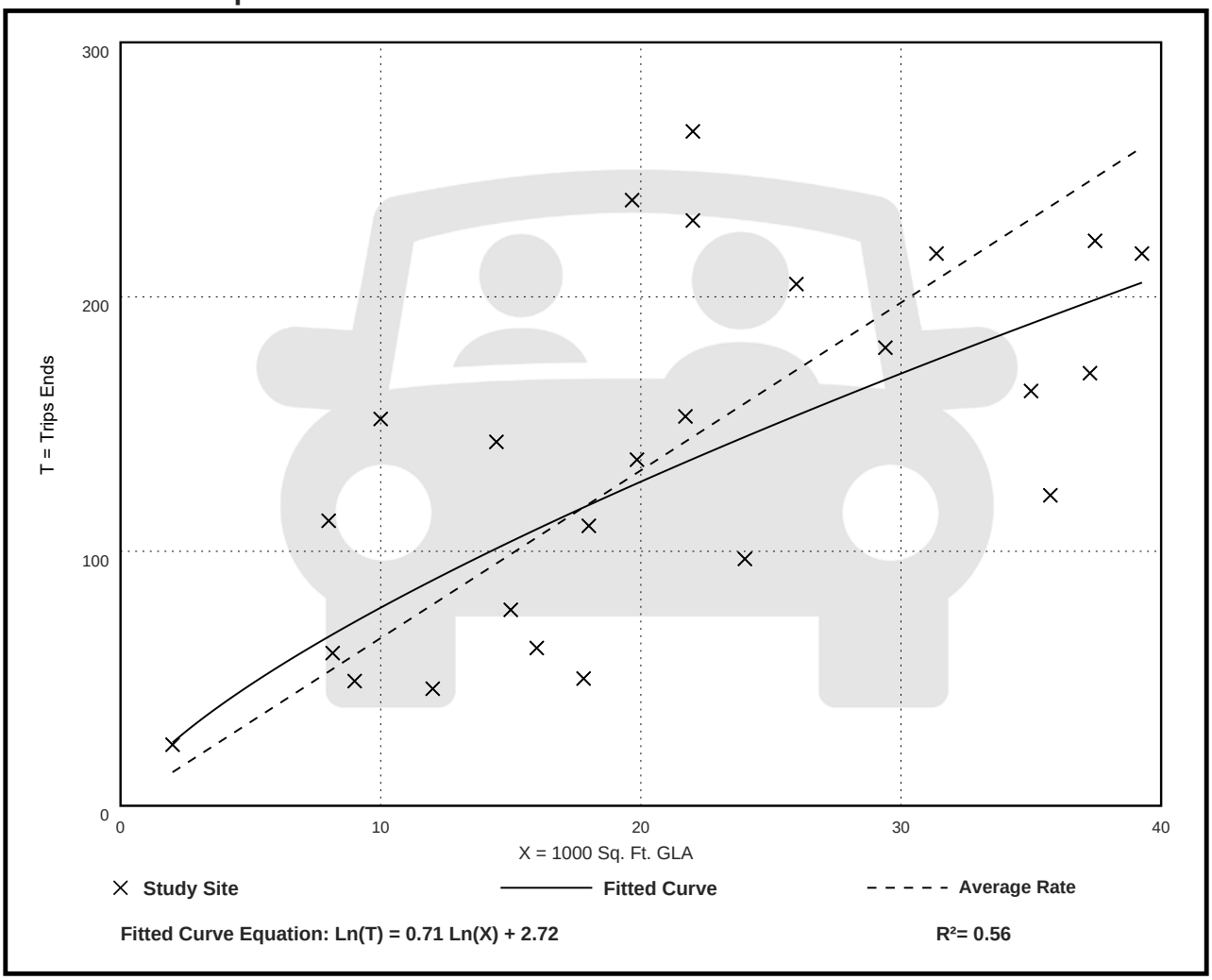
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 25
Avg. 1000 Sq. Ft. GLA: 21
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.71 Ln(X) + 2.72

R^2= 0.56

APPENDIX B – City of Tustin VMT Screening Form

CITY OF TUSTIN
VMT SCREENING FORM FOR LAND USE PROJECTS

This form acknowledges the City of Tustin requirements for the evaluation of vehicle miles traveled (VMT) under CEQA. The analysis provided in this form should follow the City of Tustin approved VMT Guidelines, dated February 13, 2024.

I. Project Description

Case Number:	
Project Name:	Tustin Legacy Specific Plan Amendment
Project Location:	Planning Area (PA) 8, PA 13 &14, and PA 15 in the TLSP.
Project Description:	4,970 dwelling units within the TLSP. Replace 93,600 square feet (SF) of hotel use, 95,200 SF of neighborhood commercial use, 482,900 SF of community commercial use and 529,000 SF of senior housing use with 1,200,700 SF of office use.

Current GP Land Use:	TLSP	**Proposed GP Land Use:**	TLSP
Current Zoning:	SP 1 - Tustin Legacy	**Proposed Zoning:**	SP 1 - Tustin Legacy

Does the Project require a General Plan Amendment and/or Zone Change?	**YES**		**NO**	x	

II. VMT Screening Criteria

A. Is the Project 100% affordable housing?	**YES**		**NO**	X	Attachments:	
B. Is the Project within 1/2 mile of qualifying transit?	**YES**		**NO**	X	Attachments:	
		Commercial		Residential		
C. Is the Project a local serving land use?	**YES**	X	**NO**	X	Attachments:	
D. Is the Project in a low VMT area?	**YES**		**NO**	X	Attachments:	
		Commercial		Residential		
E. Are the Project's Net Daily Trips less than 500 ADT?	**YES**	X	**NO**	X	Attachments:	

Low VMT Area Evaluation:

City of Tustin VMT Thresholds		
Citywide Average Home-Based VMT[1] =	15.0	VMT/Capita
Citywide Average Employment VMT[1] =	25.1	VMT/Employee

[1] OCTAM 5.0 v.6.22.23 base year (2016) statistics.

Project Traffic Analysis Zone (TAZ)	VMT Rate for Project TAZ[1]		Type of Project	
1133,1134,1136	N/A,13.4,8.3	VMT/Capita	Residential:	X
	N/A,26.0,36.8	VMT/Employee	Non-Residential:	X

Trip Generation Evaluation:

Source of Trip Generation: Institute of Transportation Engineers (ITE), Trip Generation Manual,11th Edition, 2021

* Use trip rates from the latest edition of the ITE Trip Generation Manual or as approved by City Staff.

Project Trip Generation: 15,679 **Average Daily Trips (ADT)**

Internal Trip Credit:	YES		NO	X	% Trip Credit:	
Pass-By Trip Credit:	YES		NO	X	% Trip Credit:	
Affordable Housing Credit:	YES		NO	X	% Trip Credit:	
Existing Land Use Trip Credit:	YES		NO	X	Trip Credit:	

Net Project Trip Generation: 15,679 **Average Daily Trips (ADT)** Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA? **YES** X **NO**

III. VMT Analysis Summary

A. Is additional VMT modeling required to evaluate impacts?	**YES**	x	**NO**	

Projects that do not satisfy at least one (1) of the VMT screening criteria AND generate 2,400 or more net daily trips AND require a zone change/general plan amendment may require additional VMT modeling using OCTAM. Project that generates less than 2,400 daily trips may use the base TAZ rate for VMT analysis and mitigation purposes.

B. City of Tustin VMT Threshold of Significance: Residential-VMT per Capita: City's Threshold: 15.0

C. Unmitigated Project VMT Rate: TAZ: 1133,1134,1136 Residential
Based Year 2016 : 8.3, 14.0, 8.2- VMT/Capita
Future Year 2045: 10.8, 14.4, 9.0- VMT/Capita

D. Does Unmitigated Project VMT Rate Exceed VMT Threshold?	**YES**		**NO**	x
E. Is mitigation required?	**YES**		**NO**	x

F. Percentage Reduction Required to Achieve the Citywide Average VMT:

G. Mitigation Measures:

Source:		
	VMT Reduction Mitigation Measure:	**Estimated VMT Reduction (%)**
1.	N/A	0.00%
2.	N/A	0.00%
3.	N/A	0.00%
4.	N/A	0.00%
5.	N/A	0.00%
6.	N/A	0.00%
7.	N/A	0.00%
8.	N/A	0.00%
9.	N/A	0.00%
10.	N/A	0.00%
	Total VMT Reduction (%)	

All mitigation measures are subject to become Conditions of Approval of the project. Provide attachments showing all VMT reduction calculations.

H. Mitigated Project TAZ VMT Rate:

I. Significance Finding:
(Less than significant, less than significant with mitigation, potential significant, etc.)
Less than significant

Prepared By		**Developer/Applicant**	
Company:	EPD Solutions	**Company:**	City of Tustin
Contact:	Abby Pal (abby@epdsolutions.com)	**Contact:**	Krys Saldivar
Address:	3333 Michelson Drive, Suite 500 Irvine, CA	**Address:**	300 Centennial Way, Tustin, CA 92780
Phone:	949-794-1180	**Phone:**	714-573-3172
Email:	techservices@epdsolutions.com	**Email:**	ksaldivar@tustinca.org
Date:	Revised 3/22/2024	**Date:**	Revised 3/22/2024

Approved by:

Tustin Public Works Engineering	**Date**	**Tustin Community Development Planning**	**Date**

Development review and processing fees should be submitted with, or prior to the submittal of this Form.
The Public Works and/or Planning Division staff will not process the Form prior to fees being paid to the City.

OCTAM 5.0 v.6.22.23 Base Model Year 2016 VMT Statistics

Zone	Home-based VMT per Capita	Employment (commute) VMT per employee
759	8.8	25.2
832	23.6	33.8
851	23.5	34.3
857	16.0	26.0
859	13.0	25.2
863	16.9	25.3
1102	15.4	25.9
1103	12.1	25.3
1104	21.1	30.1
1105	12.2	25.1
1106	15.8	24.6
1107	14.5	24.3
1108	21.8	33.2
1109	11.6	24.4
1110	21.2	29.4
1111	13.8	24.6
1112	11.4	22.8
1113	10.7	23.6
1114	11.6	23.6
1115	14.1	24.4
1116	15.5	28.6
1117	12.1	24.3
1118	17.2	26.8
1119	15.0	26.0
1120	16.0	27.6
1121	12.9	23.3
1122	13.5	32.1
1123	11.6	22.5
1124	14.7	27.4
1125	16.8	24.5
1126	0.0	23.6
1127	17.5	27.4
1128	0.0	25.2
1129	17.2	28.0
1130	0.0	24.8
1131	18.0	25.7
1132	0.0	25.0
1133	0.0	0.0
1134	13.4	26.0
1135	0.0	0.0
1136	8.3	36.8
1137	17.2	29.6
1138	0.0	25.3

* Geography nests into OCTAM zone structure. VMT includes all VMT to/from specified geography, except for VMT that leaves OCTAM model area.

** Note that as OCTAM is updated, these statistics are subject to change.

Appendix E
Water Supply Assessment

IRVINE RANCH WATER DISTRICT
ASSESSMENT OF WATER SUPPLY
Water Code §10910 *et seq.*

To: (*Lead Agency*)

City of Tustin
300 Centennial Way
Tustin, CA 92780

(*Applicant*)
City of Tustin
300 Centennial Way
Tustin, CA 92780

Project Information

Project Title: Tustin Legacy Specific Plan Amendment (Exhibit A)

☒ *Residential*: No. of dwelling units: 4,780 dwelling units (See Exhibit B)
☒ *Shopping center or business*: No. of employees N/A Sq. ft. of floor space 9,532,419 total (no change)
☐ *Commercial office*: No. of employees _____ Sq. ft. of floor space _____
☐ *Hotel or motel*: No. of rooms _____
☐ *Industrial, manufacturing or processing*: No. of employees _____ No. of acres _____ Sq. ft. of floor space _____
☒ *Mixed use* (check and complete all above that apply) _____
☐ *Other*: _____

Assessment of Availability of Water Supply

On February 12, 2024 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within assessment and made the following determination regarding the above-described Project:

☐ The projected water demand for the Project ☐ was ☐ was not included in IRWD's most recently adopted urban water management plan.

☒ A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

☐ A sufficient water supply is not available for the Project. *[Plan for acquiring and developing sufficient supply attached. Water Code § 10911(a)]*

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of IRWD.

Leslie Bonkowski 2/13/24 District Secretary
Signature *Date* *Title*

Water Supply Assessment Information

Purpose of Assessment

Irvine Ranch Water District ("IRWD") has been identified by the City as a public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this assessment (the "Project"). As the public water system, IRWD is required by Section 10910 *et seq.* of the Water Code to provide the City with an assessment of water supply availability ("assessment") for defined types of projects. The Project has been found by the City to be a project requiring an assessment. The City is required to include this assessment in the environmental document for the Project, and based on the record, make a determination whether projected water supplies are sufficient for the Project and existing and planned uses.

Water Code Section 10910 *et seq.* (the "Assessment Law") contains the requirements for the information to be set forth in the assessment.

Prior Water Supply Assessments

IRWD does not allocate particular supplies to any project but identifies total supplies for its service area. Because of IRWD's aggregation of demands and supplies, each assessment completed by IRWD is expected to be generally similar to the most recent assessment, with changes as needed to take into account changes, if any, in demands and supplies, and any updated and corrected information obtained by IRWD. Previously assessed projects' water demands will be included in the baseline. A newly assessed project's water demand will have been included in previous water supply assessments for other projects (as part of IRWD's "full build-out" demand) to the extent of any land use planning or other water demand information for the project that was available to IRWD.

The Project's water demand was included (as part of IRWD's "full build-out" demand) in previous water supply assessments performed by IRWD, based on land use planning information available to IRWD. In this water supply assessment, the Project demand will be revised in accordance with updated information provided by the applicant and included in the "with project" demand.

Supporting Documentation

IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631 *et seq.*), and, as a result, is more limited than the WRMP in the treatment of supply and demand issues. Therefore, IRWD primarily relies on its most recent WRMP. The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's most recent update of that document (2020 UWMP) was adopted in June 2021.

In addition to the WRMP and the 2020 UWMP mentioned above, other supporting documentation referenced herein is found in Section 6 of this assessment.

Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2(b) of this assessment (written contracts/proof of entitlement). Copies of the summarized items can be obtained from IRWD.

Assessment Methodology

Water use factors; dry-year increases. IRWD employs water use factors to enable it to assign water demands to the various land use types and aggregate the demands. The water use factors are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other water use efficiency programs. The factors are derived from historical usage (billing data) and a detailed review of water use factors within the IRWD service areas conducted as a part of the WRMP. System losses at a rate of approximately 5% are built into the water use factors. Water demands also reflect normal hydrologic conditions (precipitation). Lower levels of precipitation and higher temperatures will temporarily result in higher water demands, due primarily to the need for additional water for irrigation. To reflect this, base (normal) WRMP water demands have been increased by 7% in the assessment during both "single-dry" and "multiple-dry" years. This increase in estimated demands is considered conservative and is consistent with the Municipal Water District of Orange County's ("MWDOC") 2020 UWMP which assumes increased demands in single-dry and multiple dry years of 6% based on MWDOC's Orange County Reliability Study (MWDOC 2020 UWMP, pg. 7-2). The Metropolitan Water District of Southern California ("MWD") also considers these weather variables in their climate adjustment factors when forecasting demands, as documented in MWD's 2020 UWMP which shows an average increase of 8% for single dry year demands (MWD 2020 UWMP Tables 2-4, 2-5, 2-6) and also documented in their 2020 Integrated Resources Plan - Regional Needs Assessment (2022).

Planning horizon. In accordance with Water Code Section 10910, this assessment reviews demands and supplies covering a 20-year planning horizon. For consistency with IRWD's WRMP, the assessment reviews demands and supplies through the year 2044, which is considered to include build-out or "ultimate development".

Assessment of demands. Water demands are reviewed in this assessment for three development projections (to 2044):

- Existing and committed demand (without the Project) ("baseline"). This provides a baseline condition as of the date of this assessment, consisting of demand from existing development, plus demand from development that has both approved zoning and (if required by the Assessment Law) an adopted water supply assessment.

- Existing and committed demand, plus the Project ("with-project"). This projection adds the Project water demands to the baseline demands.

- Full WRMP build-out ("full build-out"). In addition to the Project, this projection adds potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of the WRMP.

Assessment of supplies. For comparison with demands, water supplies are classified as *currently available* or *under development*:

- *Currently available* supplies include those that are presently operational, and those that will be operational within the next several years. Supplies expected to be operational in the next several years are those having completed or substantially completed the environmental and regulatory review process, as well as having necessary contracts (if any) in place to move forward. These supplies are in various stages of planning, design, or construction.

- In general, supplies *under development* may necessitate the preparation and completion of environmental documents, regulatory approvals, and/or contracts prior to full construction and implementation.

IRWD is also evaluating the development of additional supplies that are not included in either *currently available* or *under-development* supplies for purposes of this assessment. As outlined in the WRMP, prudent water supply and financial planning dictates that development of supplies be phased in over time consistent with the growth in demand.

Water supplies available to IRWD include several sources: groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; recycled sewage; and supplemental imported water supplied by MWD through the MWDOC. The supply-demand comparisons in this assessment are broken down among the various sources and are further separated into potable and nonpotable water sources.

Comparison of demand and supply. The three demand projections noted above (baseline, with-project and full build-out) are compared with supplies in the following ways:

- On a total *annual* quantity basis (stated in acre-feet per year ("AFY")).

- On a *peak-flow* (maximum day) basis (stated in cubic feet per second ("cfs")).

- Under three climate conditions: base (normal) conditions and single-dry and multiple-dry year conditions. (Note: These conditions are compared for *annual* demands and not for *peak-flow* demands. *Peak-flow* is a measure of a water delivery system's ability to meet the highest day's demand of the fluctuating demands that will be experienced in a year's time. Peak demands occur during the hot, dry season and as a result are not appreciably changed by dry-year conditions; dry-year conditions do affect *annual* demand by increasing the quantity of water needed to supplement normal wet-season precipitation.)

Summary of Results of Demand-Supply Comparisons

Listed below are Figures provided in this assessment, comparing projected potable and nonpotable water supplies and demands under the three development projections:

Figure 1: Normal Year Supply and Demand – Potable Water
Figure 2: Single Dry-Year Supply and Demand – Potable Water
Figure 3: Multiple Dry-Year Supply and Demand – Potable Water
Figure 4: Maximum-Day Supply and Demand – Potable Water
Figure 5: Normal Year Supply and Demand – Nonpotable Water
Figure 6: Single Dry-Year Supply and Demand – Nonpotable Water
Figure 7: Multiple Dry-Year Supply and Demand – Nonpotable Water
Figure 8: Maximum-Day Supply and Demand – Nonpotable Water

It can be observed in the Figures that IRWD's *supplies* remain essentially constant between normal, single-dry, and multiple-dry years. This result is due to the fact that groundwater and MWD imported water account for the majority of all of IRWD's potable supply, and recycled water, groundwater and imported water comprise all of IRWD's nonpotable supply. Groundwater production typically remains constant or may increase in cycles of dry years, even if overdraft of the basin temporarily increases, as groundwater producers reduce their demand on imported supplies to secure reliability. (See Section 4 herein.) As to imported water, MWD's 2020 Urban Water Management Plan (MWD 2020 UWMP) concludes that MWD has supply capabilities sufficient to meet expected demands from 2025 through 2045 under a single dry year condition and a period of drought lasting five consecutive water years, as well as in a normal water year hydrologic condition. (See also Section 2(b) (1) "IMPORTED SUPPLY - ADDITIONAL INFORMATION," below.) Recycled water production also remains constant and is considered "drought-proof" as a result of the fact that sewage flows remain virtually unaffected by dry years. Only a small portion of IRWD's supply, native water captured in Irvine Lake, is reduced in single-dry and multiple-dry years. The foregoing factors also serve to explain why there is no difference in IRWD's supplies between single-dry and multiple-dry years.

A review of the Figures indicates the following:

- *Currently available* supplies of potable water are adequate to meet annual demands for the *baseline, with-project* and *full build-out* scenarios projected under the normal year, and the single- and multiple-dry year conditions through the year 2044. (Figures 1, 2 and 3.) IRWD plans to proceed with the implementation of future potable supplies (*under development)*, as shown in the Figures, to improve local reliability during dry-year conditions.

- Adequate *currently available* potable water supply capacity is available to meet *peak-flow* (maximum day) demands for all demand projections through the year 2044. (Figure 4.)

- With respect to nonpotable water, *currently available* supplies are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under both dry-year conditions through the year 2044. (Figures 5, 6, 7 and 8.) IRWD has implemented all planned nonpotable supplies, as shown in the Figures, to improve local reliability during dry-year conditions.

The foregoing Figures provide an overview of IRWD potable and nonpotable water supply capabilities. More detailed information on the anticipated development and use of supplies, which incorporates source costs and reliability issues, is provided in the WRMP.

Margins of safety. The Figures and other information described in this assessment show that IRWD's assessment of supply availability contains several margins of safety or buffers:

- "Reserve" water supplies (excess of supplies over demands) will be available to serve as a buffer against inaccuracies in demand projections, future changes in land use, or alterations in supply availability.

- Conservative estimates of annual potable and nonpotable *imported* supplies have been made based on connected delivery capacity (by application of peaking factors as

described below in Section 2, footnote 1); additional supplies are expected to be available from these sources, based on legal entitlements, historical uses and information provided by MWD. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning operational limits on Delta pumping. See "***Actions on Delta Pumping,***" below.

- Information provided by MWD, as the imported water supplier, concerning the adequacy of its regional supplies, summarized herein, demonstrates MWD's inclusion of reserves in its regional supply assessments. In addition to MWD's existing regional supply assessments, this assessment has considered MWD's information concerning operational limits on Delta pumping. See "***Actions on Delta Pumping,***" below.

- Although groundwater supply amounts shown in this assessment assume production levels within applicable basin production percentages described herein, production of groundwater can exceed applicable basin production percentages on a short-term basis, which can provide additional reliability during dry years or emergencies. See "***IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD,***" below.

Actions on Delta Pumping. The Sacramento/San Joaquin Delta ("Delta") is a vulnerable component in both the State and Federal systems to convey water from northern portions of California to areas south of the Delta. Issues associated with the Delta have generally been known for years; however, the continuing decline in the number of endangered Delta smelt resulted in the filing of litigation challenging permits for the operation of the Delta pumping facilities. On August 31, 2007, a Federal court ordered interim protective measures for the endangered Delta smelt, including operational limits on Delta pumping, which have an effect on State Water Project ("SWP") operations and supplies. On June 4, 2009, a federal biological opinion imposed rules that further restrict water diversions from the Delta to protect endangered salmon and other endangered fish species. Several proceedings concerning Delta operations were initiated to evaluate options to address Delta smelt impacts and other environmental concerns. In addition to the regulatory and judicial proceedings to address immediate environmental concerns, the Delta Vision process and Bay-Delta Conservation Plan ("BDCP") process were established to identify long-term solutions for the Delta. In addition, State and federal agencies and water user entities are currently engaged in the development of the Delta Conveyance Project (previously California WaterFix), which is aimed at making physical and operational improvements in the Delta necessary to improve south of the Delta SWP water supplies and water quality and protect ecosystem health in the Delta (MWD 2020 UWMP). Prior to the 2007 court decision, MWD's Board approved a Delta Action Plan in May 2007, that described short, mid and long-term conditions and the actions to mitigate potential supply shortages and to develop and implement long-term solutions. To address uncertainties in expected SWP supplies, in October 2007, MWD prepared its 2007 Integrated Resources Plan ("IRP") Implementation Report, in which MWD estimated that it could see as much as up to a 22% reduction on average of its SWP supplies based on the court order. As part of its ongoing long term planning, in its 2010 IRP Update, MWD identified changes to the long-term plan and established direction to address the range of potential changes in water supply planning. The 2010 IRP also discusses dealing with uncertainties related to impacts of climate change (see additional discussion of this below), as well as actions to protect endangered fisheries. The 2010 IRP Update emphasizes an evolving approach and suite of actions to address the water supply challenges that are posed by uncertain weather patterns, regulatory and environmental restrictions, water quality impacts and changes in the state and the region. The 2010 IRP Update includes MWD's Adaptive Resource Management Strategy three components: Core Resources Strategy, Supply Buffer Implementation and Foundational Actions, which together

provides the basis for the 2010 IRP Update. The 2010 IRP Update expands the concept of developing a planning buffer from the 2004 IRP Update by implementing a supply buffer equal to 10 percent of the total retail demand.

In January 2016, MWD adopted its 2015 IRP Update. In the 2015 IRP Update, MWD continued its Adaptive Resource Management Strategy and integrated future supply actions to improve the viability of potential contingency resources as needed, and to position the region to effectively implement these resources in a timely manner. The 2015 IRP finds that additional actions are needed in investments in conservation, local supplies, the Delta Conveyance Project (previously California WaterFix), and stabilizing Colorado River supplies. Among the supply actions, MWD will continue to work collaboratively with state and federal agencies on the California WaterFix, maximize its storage and transfer approach, and continue to develop and protect local supplies and conservation.

MWD is currently developing its 2020 IRP Update and has completed and adopted a 2020 IRP Regional Needs Assessment which is considered Phase 1 of the 2020 IRP. A One Water Implementation phase will be Phase 2 of the 2020 IRP. The One Water Implementation will take the results and findings of Phase 1 to identify integrated regional solutions. It will include an updated Adaptive Management Strategy, policies, programs and projects to address the findings and mitigate any potential shortages.

IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD: In the MWD 2020 UWMP, MWD states it has supply capability that would be sufficient to meet expected demands from 2025 to 2045 under single dry year and multiple dry year conditions. [1]

Based on the prior MWD 2007 IRP Implementation Report and also reported in the MWD 2015 IRP, MWD estimated that it could receive reduction of SWP supplies of up to 22% on average until a long-term solution was implemented. For purposes of ensuring a conservative analysis, IRWD made an evaluation of the effect of the 22% estimated reduction of MWD's SWP supplies on its overall imported supplies. IRWD estimates that 22% reduction of SWP supplies conservatively translates to approximately 16% reduction in all of MWD's imported supplies over the years 2025 through 2045. For this purpose, it is assumed that MWD's total supplies consist only of imported SWP and Colorado deliveries. Based on this estimate, this assessment uses a 16% reduction in MWD supplies available to IRWD for the years 2025 through 2045, using IRWD's connected capacity without any water supply allocation imposed by MWD. This reduction in MWD supplies is reflected in Figures 1, 2, 3, 5, 6, and 7. (See also the footnote 1).

Per the MWD 2020 UWMP, MWD performs water shortage planning in its Water Surplus and Drought Management ("WSDM") Plan (1988) which guides MWD's planning and operations during both shortage and surplus conditions. Furthermore, MWD developed the Water Supply Allocation Plan ("WSAP") (dated February 2009, updated December 2014) which provides standardized methodology for allocation of MWD's supplies during times of shortage. The WSDM Plan distinguishes between shortages, severe shortages, and extreme shortages.

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[1] The MWD 2020 UWMP utilized DWR's 2019 SWP Delivery Capability Report to estimate future SWP supplies for 2025 through 2045. These estimates incorporate the effect of regulatory requirements in accordance with biological opinions and also reflect potential impacts of climate change on SWP operations. Tables A.3-7 of the MWD 2020 UWMP reflect 58% or 1.1 MAF in MWD's expected average year SWP entitlement supplies. This amount is a higher expected average than MWD's 2015 estimate of 984,000 AF. For purposes of a conservative analysis, IRWD has used the 22% reduction in its supplies from MWD as the basis of IRWD's analysis.

These terms have specific meanings relating to MWD's ability to deliver water and the actions it takes. In June 2008, MWD's Board adopted a Water Supply Condition Framework to communicate the urgency of the region's water supply situation and the need for further water conservation to reduce regional demands, MWD uses the WSDM Plan and Framework to determine if a WSAP is recommended.

As an alternative means of analyzing the effect of reduced MWD supplies on IRWD, listed below are Figures provided comparing projected potable water supplies and demands in all of the five year increments, under a temporary MWD allocation scenario:

Figure 1a: Normal Year Supply and Demand (MWD Allocated) – Potable Water
Figure 2a: Single Dry-Year Supply and Demand (MWD Allocated) – Potable Water
Figure 3a: Multiple Dry-Year Supply and Demand (MWD Allocated) – Potable Water

Figures 1a, 2a, and 3a show IRWD's estimated supplies (average and single and multiple dry years) under a short-term MWD water supply allocation scenario whereby MWD declares a shortage stage under its WSAP, and a cutback is applied to IRWD's actual usage rather than its connected capacity. IRWD's evaluation of reduced MWD supplies to IRWD as shown in Figures 1a, 2a and 3a conservatively analyzes the effect of up to a MWD level 5 Regional Shortage Level. In addition, these Figures do not reflect a reduction in demands, thus representing a more conservative view of IRWD's supply capability. (see ***"Recent Actions Related to Drought Conditions"*** below*)*

On April 14, 2015, MWD approved the implementation of its WSAP at a level 3 Regional Shortage Level and an effective 15% reduction in regional deliveries effective July 1, 2015, through June 30, 2016. As a result of IRWD's diversified water supplies, IRWD is reliant on MWD for only 20% of its total supplies. IRWD's evaluation of reduced MWD supplies to IRWD as shown in Figures 1a, 2a and 3a includes MWD's 2015 actions to implement a level 3 Regional Shortage Level and 15% reduction.

Under shortage scenarios, IRWD may need to supplement supplies with production of groundwater, which can exceed the applicable basin production percentage on a short-term basis, providing additional reliability during dry years or emergencies.[2]

[2] In these scenarios, it is anticipated that other water suppliers who produce water from the Orange County Basin will also experience cutbacks of imported supplies and will increase groundwater production and that Orange County Water District ("OCWD") imported replenishment water may also be cutback. The OCWD's "2021-2022 Engineer's Report on the Groundwater Conditions, Water Supply and Basin Utilization" references a report (OCWD Report on Evaluation of Orange County Groundwater Basin Storage and Operational Strategy, 2007) which recommends a basin management strategy that provides general guidelines for annual basin refill or storage decrease based on the level of accumulated overdraft. It states: "Although it is considered to be generally acceptable to allow the basin to decline to 500,000 AF overdraft for brief periods due to severe drought conditions and lack of supplemental water...an accumulated overdraft of 100,000 AF best represents an optimal basin management target. This optimal target level provides sufficient storage space to accommodate anticipated recharge from a single wet year while also providing water in storage for at least 2 or 3 consecutive years of drought." MWD replenishment water is a supplemental source of recharge water and OCWD estimates other main supply sources for recharge are available.

In addition, IRWD has developed water banking projects in Kern County, California which may be called upon for delivery of supplemental banked water to IRWD under a MWD WSAP.[3] IRWD may also convert non-potable water uses to recycled water as a way to conserve potable water. In addition, if needed, resultant net shortage levels can be addressed by demand reduction programs as described in IRWD's updated Water Shortage Contingency Plan adopted in 2021. IRWD's Water Shortage Contingency Plan provides procedures for responding to various levels of supply shortages through a combination of supply augmentation and demand management measures. As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are used as necessary and appropriate during declared shortage levels.

It can be noted that IRWD's above approach is conservative, in that IRWD evaluates the effect of the 16% reduction through 2044 and shows the effect of current allocation scenarios in all of the five-year increments. However, MWD reports that it has made significant progress in other water resource categories such as transfers, groundwater storage and developing other local resources, and supplies will be available from these resources over the long-term.

Climate Change. The California Department of Water Resources ("DWR") released a report "Progress on Incorporating Climate Change into Management of California's Water Resources" (July 2006), considering the impacts of climate change on the State's water supply. In 2012, DWR adopted phase 1 of its Climate Action Plan, its department-wide plan for reducing greenhouse gas emissions (GHG). In September 2018, the DWR released phase 2 of its Climate Action Plan, which is DWR's guide to addressing climate change in the programs, projects, and activities over which it has authority. Per this guidance, California's climate policy focuses on reducing GHG emissions, preparing for climate change impacts, and supporting climate-related research to inform policy responses and decision-making processes.

In MWD's 2015 IRP Update, MWD recognizes there is additional risk and uncertainty associated with climate change that may affect future supply and demands. In the 2015 IRP Update, MWD states that it plans to hedge against supply and demand uncertainties by implementing a long-term plan that recognizes the risk and provides resource development to offset the risk. Per the MWD 2020 UWMP, for longer term risks, like climate change, MWD established a Robust Decision Making ("RDM") approach that can show how vulnerable the region's reliability is to the longer-term risks such as climate change and can also establish "signposts" that can be monitored to see when crucial changes may be happening. MWD states in its 2020 UWMP that the RDM analysis was valuable in identifying vulnerabilities to its 2015 IRP approach to long-term reliability and in understanding how climate change would best be incorporated into the 2020 IRP.

Per the MWD 2020 UWMP, MWD continues to incorporate current climate change science into its planning efforts and MWD has made great efforts to implement GHG mitigation programs and policies for its facilities and operations. In 2022, MWD released a Climate Action Plan which complements MWD's IRP planning process and set reduction targets and outlined strategies to reduce emission levels by 2045. In MWD's 2020 IRP Regional Needs Assessment, MWD finds that SWP supplies are highly susceptible to varying hydrologic conditions, climate change, and regulatory restrictions. In this report, MWD assesses climate

[3] IRWD has developed water banking projects ("Water Bank") in Kern County, California and has entered into a 30-year water banking partnership with Rosedale-Rio Bravo Water Storage District to operate IRWD's Strand Ranch and Stockdale West portions of the Water Bank. The Water Bank can improve IRWD's water supply reliability by capturing lower cost water available during wet hydrologic periods for use during dry periods. The Water Bank can enhance IRWD's ability to respond to drought conditions and potential water supply interruptions.

vulnerabilities and the need for future projects such as indirect potable reuse, stormwater capture, and expanded storage capacity to mitigate and adapt to these vulnerabilities and ensure future resilience. Specific climate change impacts on regional and local water supplies and relevant information for the Orange County hydrologic basin and Santa Ana Watershed have not been sufficiently developed at this time to permit IRWD to assess and quantify the effect of any such impact on its conclusions in the Assessment.

Catastrophic Supply Interruption Planning. MWD has developed Emergency Storage Requirements (MWD 2020 UWMP) to safeguard the region from catastrophic loss of water supply. MWD has made substantial investments in emergency storage and has based its planning on a 100% reduction in its supplies for a period of six months. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies would be restricted by a mandatory cutback of 25 percent from normal year demand deliveries. In addition, MWD discusses DWR's investments in improvements on the SWP and the long term Delta plan in the MWD 2020 UWMP (pages 3-19 to 3-23). IRWD has also addressed supply interruption planning in its WRMP and 2020 UWMP.

Recent Actions Related to Drought Conditions. In response to historically dry conditions throughout the state of California, on April 1, 2015, Governor Brown issued an Executive Order directing the State Water Resources Control Board (SWRCB) to impose restrictions to achieve an aggregate statewide 25 percent reduction in potable water use through February 2016. The Governor's Order also included mandatory actions aimed at reducing water demands, with a particular focus on outdoor water use. On May 5, 2015, the SWRCB adopted regulations which required that IRWD achieve a 16% reduction in potable water use from its 2013 potable water use levels. On November 13, 2015, Governor Brown issued an Executive Order directing the SWRCB to extend the 2015 Emergency Regulation through October 31, 2016, if drought conditions continued. On February 2, 2016, the SWRCB adopted an extended and modified Emergency Regulation. As a result of the modification, IRWD's mandated reduction was changed from 16% to 9% effective March 1, 2016. On April 14, 2015, MWD approved actions to implement its WSAP at a level 3 Regional Shortage Level and a 15% reduction in regional deliveries effective July 1, 2015, through June 30, 2016. During this period, IRWD continued to implement actions to reduce potable water demands during the drought; however, this did not affect IRWD's long-term supply capability to meet the demands. On April 7, 2017, Governor Brown rescinded the Executive Order.

In California's most recent drought (2021-2023), in July 2021, Governor Newsom called for voluntary 15 percent reduction in potable water use from all urban suppliers. Consistent with the Governor's Executive Order, IRWD implemented Level 2 of its Water Shortage Contingency Plan, although IRWD had no projected shortages in supplies. In March 2023, Governor Newsom rescinded the Executive Order.

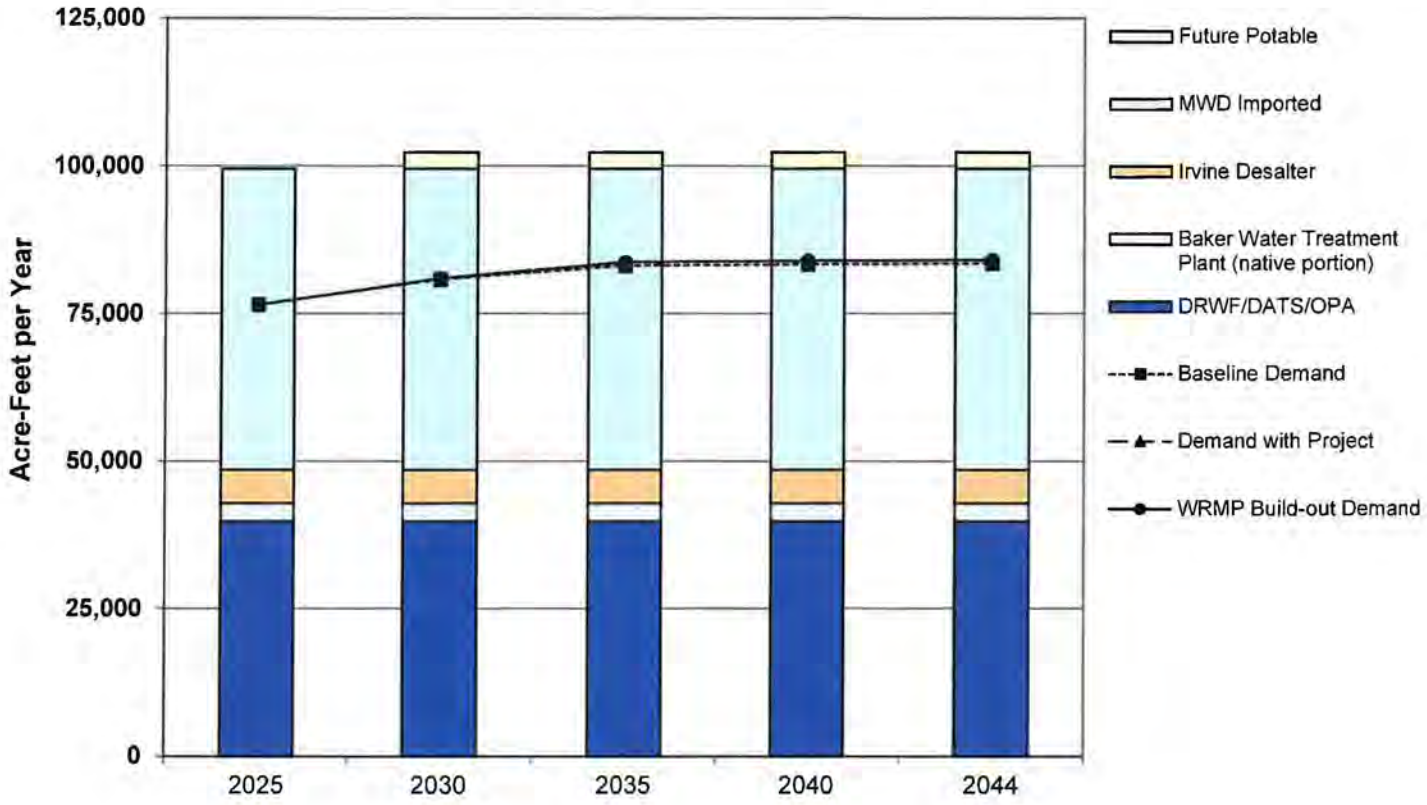
As discussed under *"IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD"* (see above), IRWD has effectively analyzed an imported water supply reduction up to a level 5 Regional Shortage Stage in Figures 1a, 2a, 3a. These Figures, however, do not reflect a reduction in demands, thus representing a more conservative view of IRWD's supply capability. In particular, the reduction in demand mandated by Senate Bill 7 in 2010, requiring urban retail water suppliers to establish water use targets to achieve a 20% reduction in daily per capita water use by 2020, has not been factored into the demands in this analysis. Similarly, notwithstanding the Governors' 2015 and 2021 orders, IRWD's conservative supply-sufficiency analysis in Figures 1a, 2a and 3a does not include the ordered reduction in potable demands.

Detailed Assessment

1. Supply and demand comparison

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1-4 (potable water), Figures 5-8 (nonpotable water) and Figures 1a, 2a, and 3a (short term MWD allocation potable water). See also the "Actions on Delta Pumping" above.

Figure 1
IRWD Normal-Year Supply & Demand - Potable Water

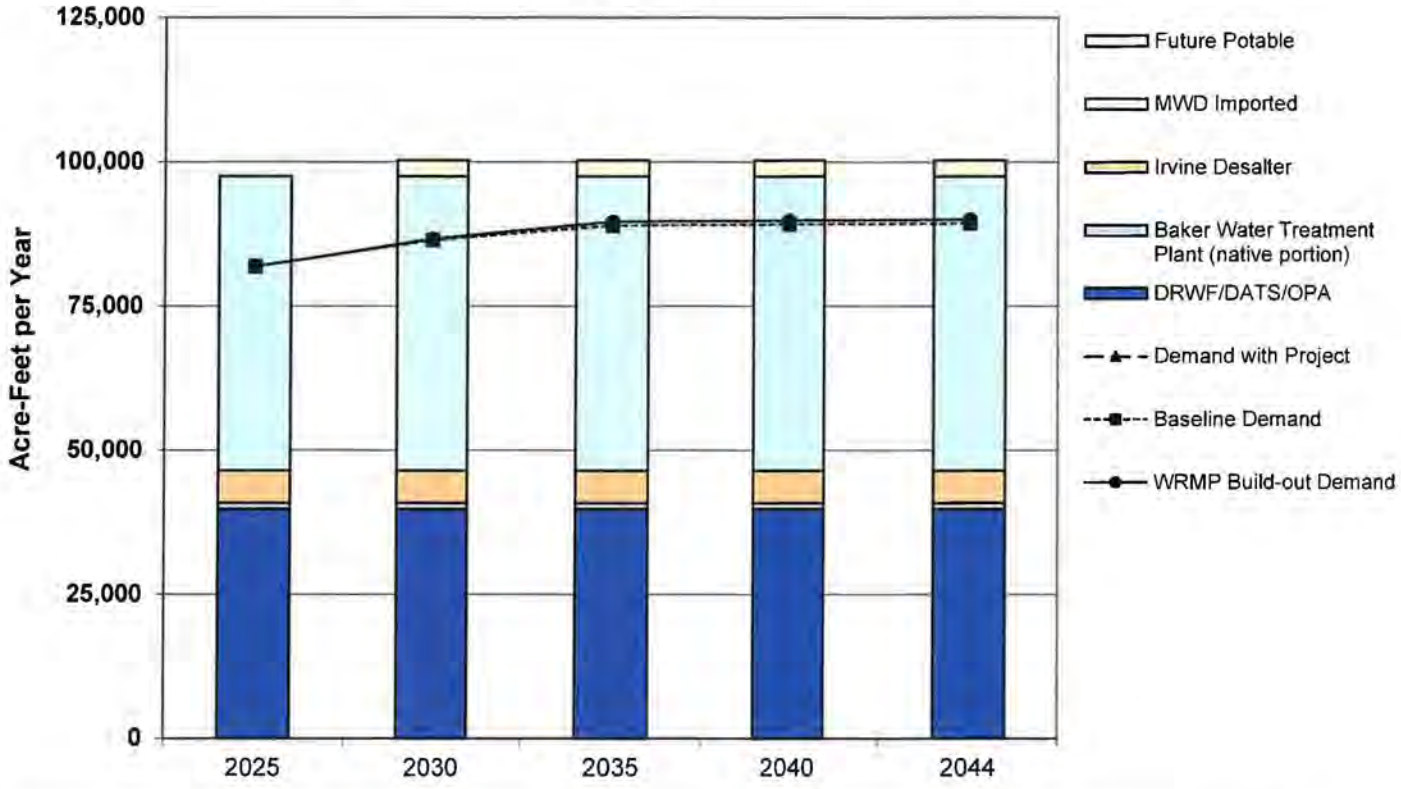


(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	51,027	51,027	51,027	51,027	51,027
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	3,048	3,048	3,048	3,048	3,048
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	101,911	104,711	104,711	104,711	104,711
Baseline Demand	76,540	80,802	83,150	83,359	83,525
Demand with Project	76,467	80,981	83,748	83,958	84,126
WRMP Build-out Demand	76,467	80,981	83,748	83,958	84,126
Reserve Supply with Project	25,444	23,730	20,963	20,753	20,585

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.
Baker Water Treatment Plant is supplied untreated imported water and native water from Irvine Lake.

Figure 2
IRWD Single Dry-Year Supply & Demand - Potable Water

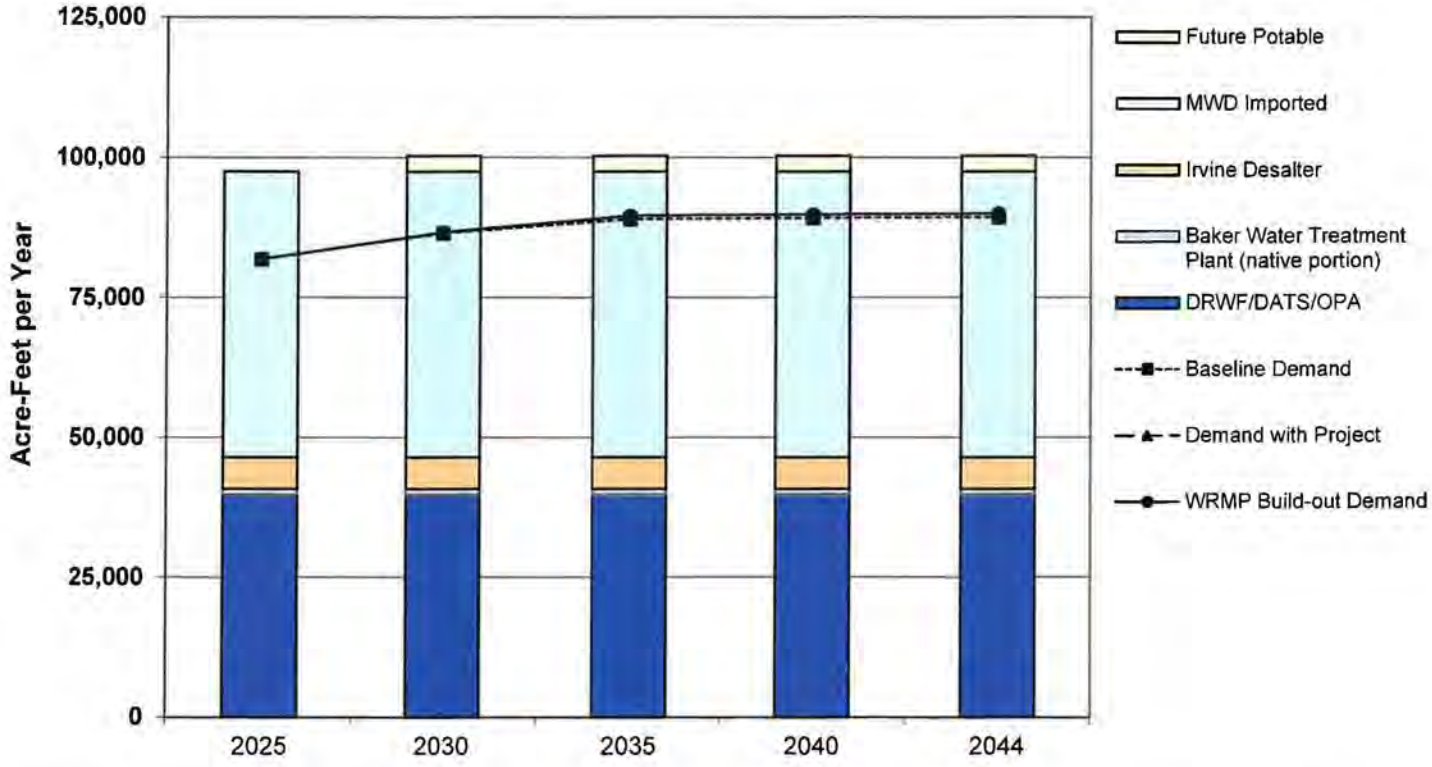


(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	51,027	51,027	51,027	51,027	51,027
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	99,863	102,663	102,663	102,663	102,663
Baseline Demand	81,898	86,458	88,971	89,194	89,372
Demand with Project	81,820	86,649	89,611	89,835	90,015
WRMP Build-out Demand	81,820	86,649	89,611	89,835	90,015
Reserve Supply with Project	18,043	16,013	13,052	12,828	12,648

Notes: Supplies identical to Normal-Year based on Metropolitan's Urban Water Management Plan and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.
Baker Water Treatment Plant is supplied untreated imported water and native water from Irvine Lake.

Figure 3
IRWD Multiple Dry-Year Supply & Demand - Potable Water

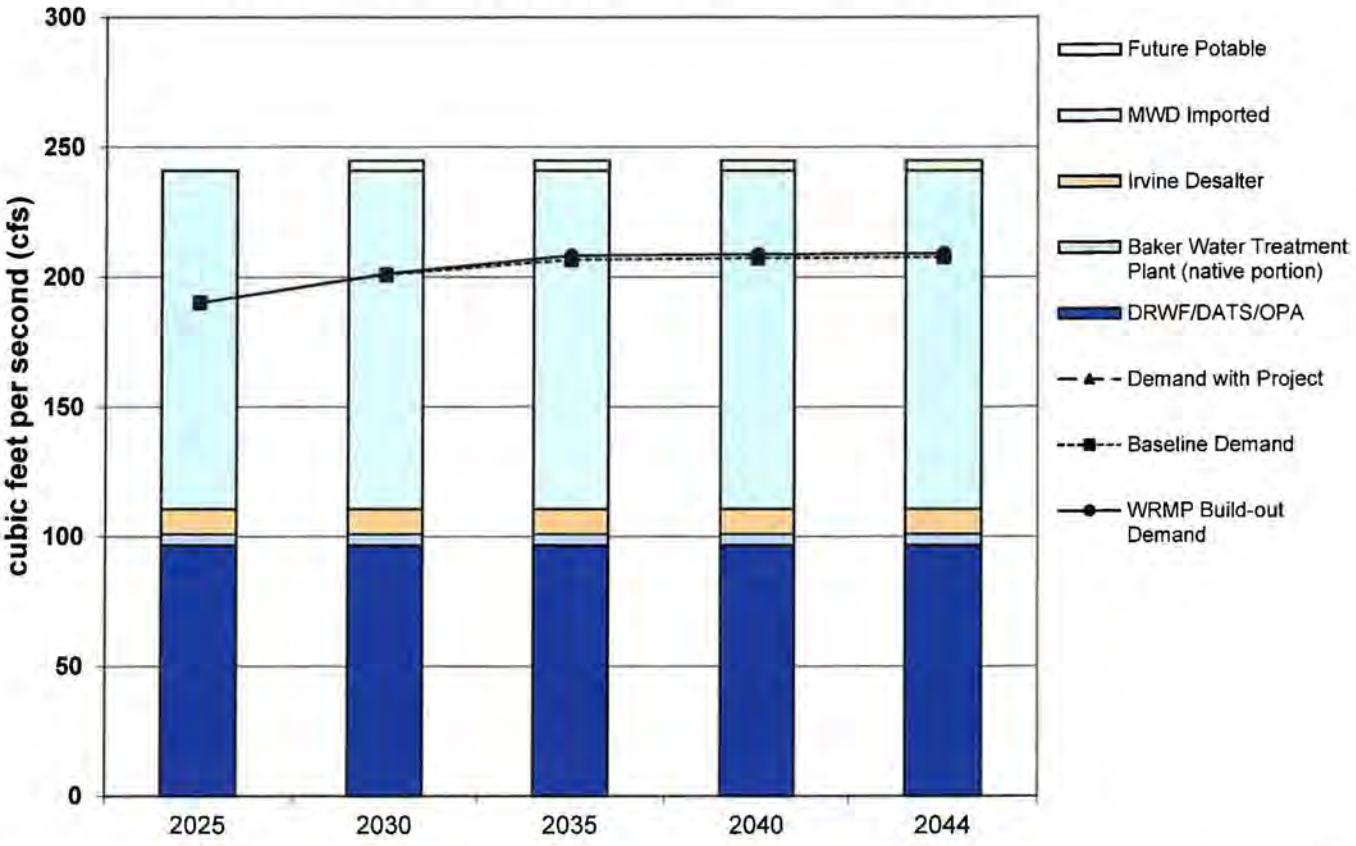


(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Bake	51,027	51,027	51,027	51,027	51,027
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	99,863	102,663	102,663	102,663	102,663
Baseline Demand	81,898	86,458	88,971	89,194	89,372
Demand with Project	81,820	86,649	89,611	89,835	90,015
WRMP Build-out Demand	81,820	86,649	89,611	89,835	90,015
Reserve Supply with Project	18,043	16,013	13,052	12,828	12,648

Notes: Supplies identical to Normal-Year based on Metropolitan's Urban Water Management Plan and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

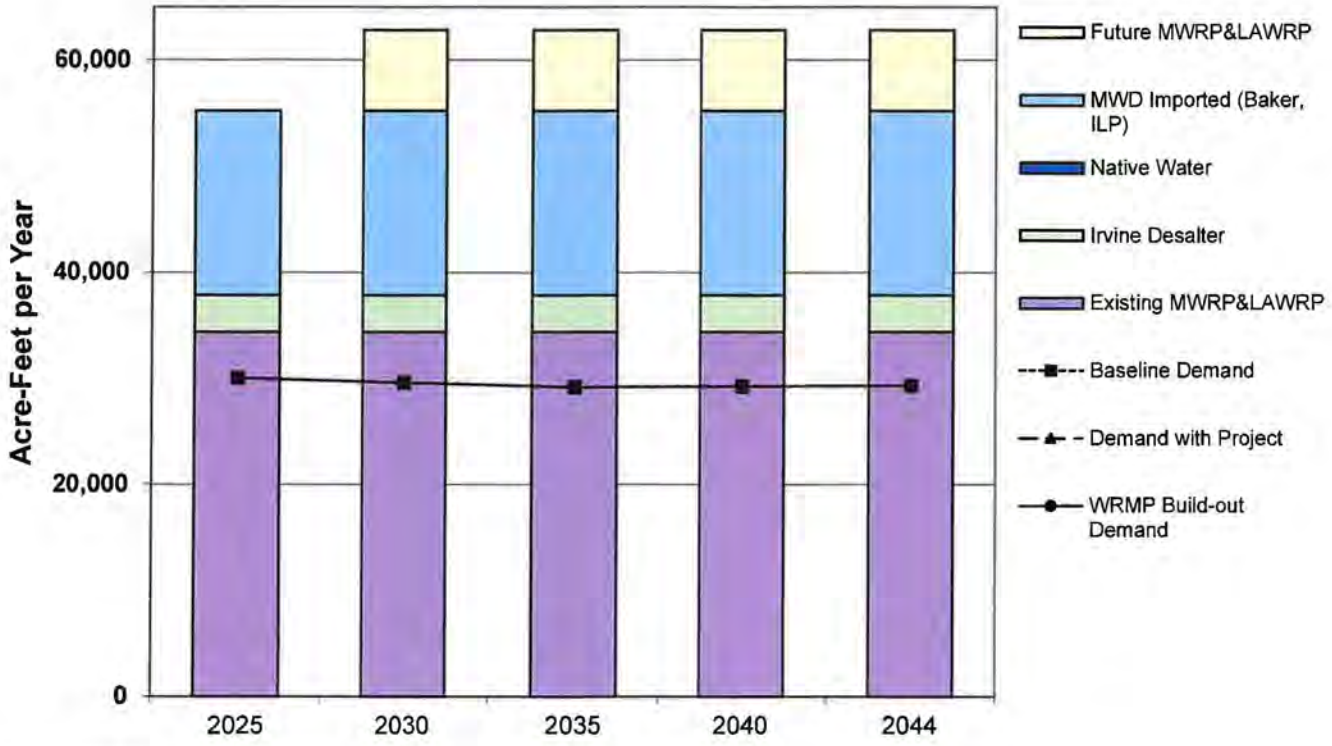
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.
Baker Water Treatment Plant is supplied untreated imported water and native water from Irvine Lake.

Figure 4
IRWD Maximum-Day Supply & Demand - Potable Water



(in cfs)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	130.4	130.4	130.4	130.4	130.4
DRWF/DATS/OPA	96.7	96.7	96.7	96.7	96.7
Irvine Desalter	9.7	9.7	9.7	9.7	9.7
Wells 21 & 22	8.6	8.6	8.6	8.6	8.6
Baker Water Treatment Plant (native portion)	4.2	4.2	4.2	4.2	4.2
Supplies Under Development					
Future Potable	-	3.9	3.9	3.9	3.9
Maximum Supply Capability	249.6	253.4	253.4	253.4	253.4
Baseline Demand	190.3	200.9	206.7	207.2	207.7
Demand with Project	190.1	201.3	208.2	208.7	209.2
WRMP Build-out Demand	190.1	201.3	208.2	208.7	209.2
Reserve Supply with Project	59.5	52.1	45.2	44.7	44.3

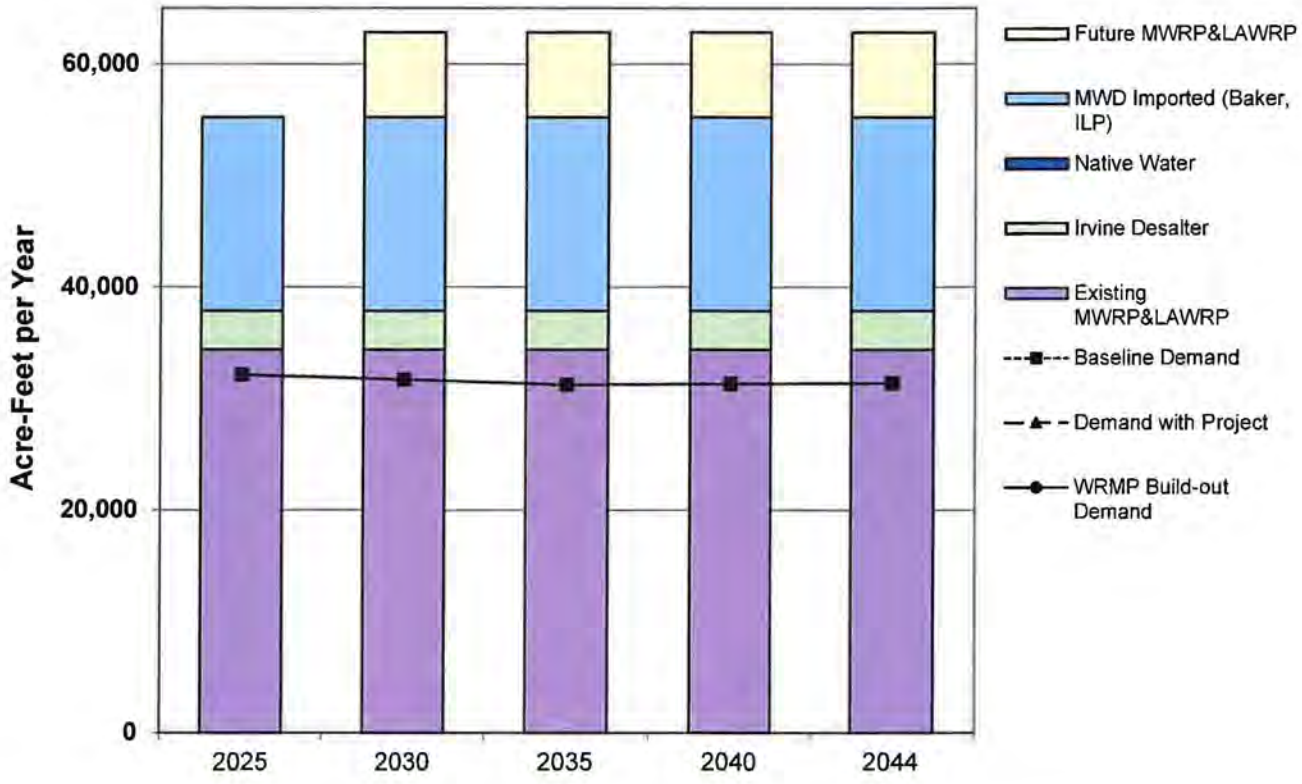
Figure 5
IRWD Normal-Year Supply & Demand - Nonpotable Water



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Nonpotable Supplies					
Existing MWRP&LAWRP	34,389	34,389	34,389	34,389	34,389
Future MWRP&LAWRP	-	7,623	7,623	7,623	7,623
MWD Imported (Baker, ILP)	17,347	17,347	17,347	17,347	17,347
Irvine Desalter	3,461	3,461	3,461	3,461	3,461
Native Water	-	-	-	-	-
Maximum Supply Capability	55,197	62,820	62,820	62,820	62,820
Baseline Demand	30,058	29,639	29,202	29,275	29,333
Demand with Project	30,020	29,606	29,179	29,252	29,310
WRMP Build-out Demand	30,020	29,606	29,179	29,252	29,310
Reserve Supply with Project	25,177	33,215	33,641	33,568	33,510

Note: Downward trend reflects reduction in agricultural use over time.
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

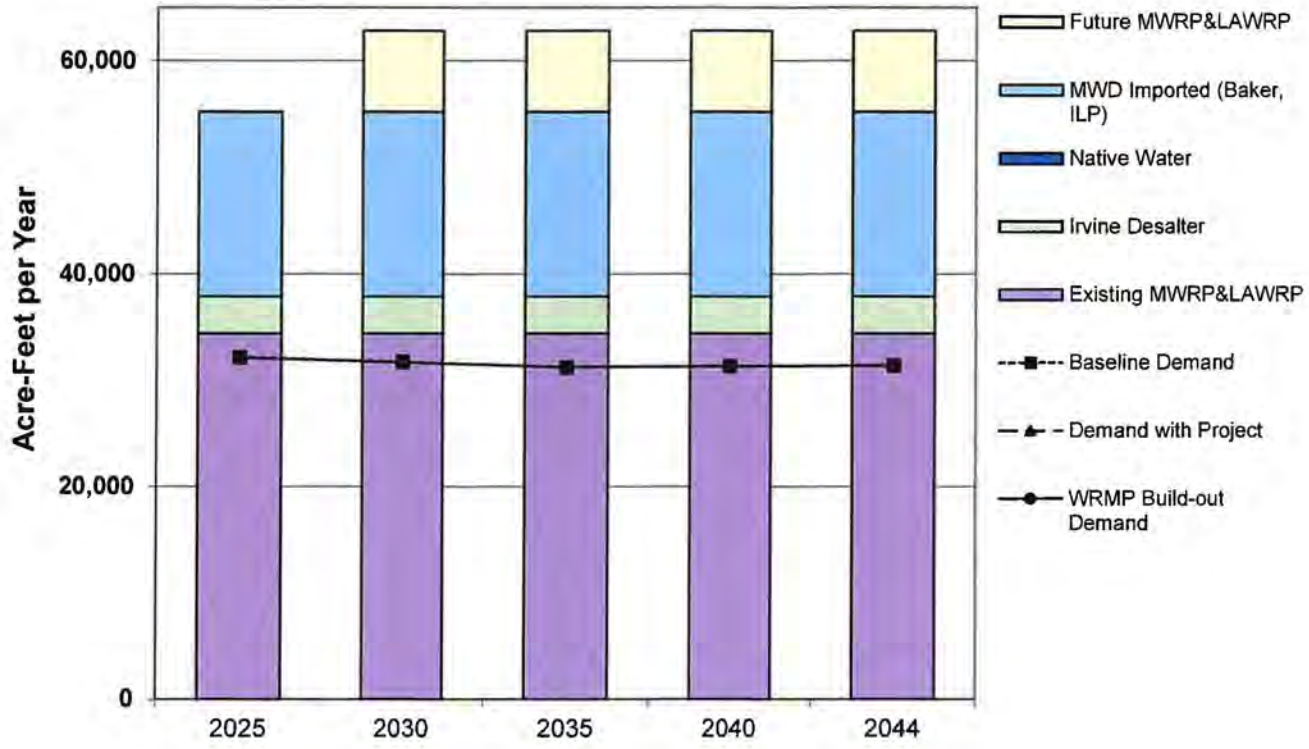
Figure 6
IRWD Single Dry-Year Supply & Demand - Nonpotable Water



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Nonpotable Supplies					
Existing MWRP&LAWRP	34,389	34,389	34,389	34,389	34,389
Future MWRP&LAWRP	-	7,623	7,623	7,623	7,623
MWD Imported (Baker, ILP)	17,347	17,347	17,347	17,347	17,347
Irvine Desalter	3,461	3,461	3,461	3,461	3,461
Native Water	-	-	-	-	-
Maximum Supply Capability	55,197	62,820	62,820	62,820	62,820
Baseline Demand	32,162	31,714	31,246	31,324	31,387
Demand with Project	32,121	31,678	31,221	31,299	31,362
WRMP Build-out Demand	32,121	31,678	31,221	31,299	31,362
Reserve Supply with Project	23,076	31,142	31,599	31,521	31,458

Note: Downward trend reflects reduction in agricultural use over time.
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

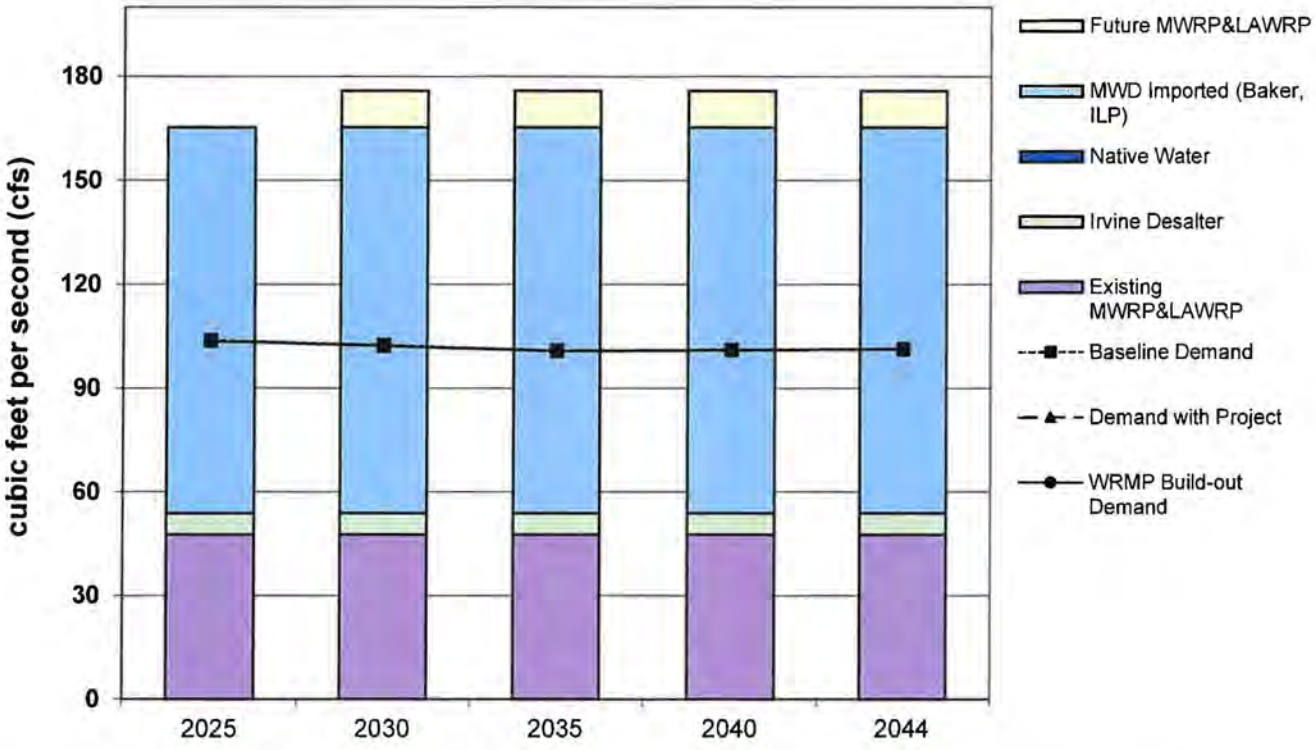
Figure 7
IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Nonpotable Supplies					
Existing MWRP&LAWRP	34,389	34,389	34,389	34,389	34,389
Future MWRP&LAWRP	-	7,623	7,623	7,623	7,623
MWD Imported (Baker, ILP)	17,347	17,347	17,347	17,347	17,347
Irvine Desalter	3,461	3,461	3,461	3,461	3,461
Native Water	-	-	-	-	-
Maximum Supply Capability	55,197	62,820	62,820	62,820	62,820
Baseline Demand	32,162	31,714	31,246	31,324	31,387
Demand with Project	32,121	31,678	31,221	31,299	31,362
WRMP Build-out Demand	32,121	31,678	31,221	31,299	31,362
Reserve Supply with Project	23,076	31,142	31,599	31,521	31,458

Note: Downward trend reflects reduction in agricultural use over time.
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

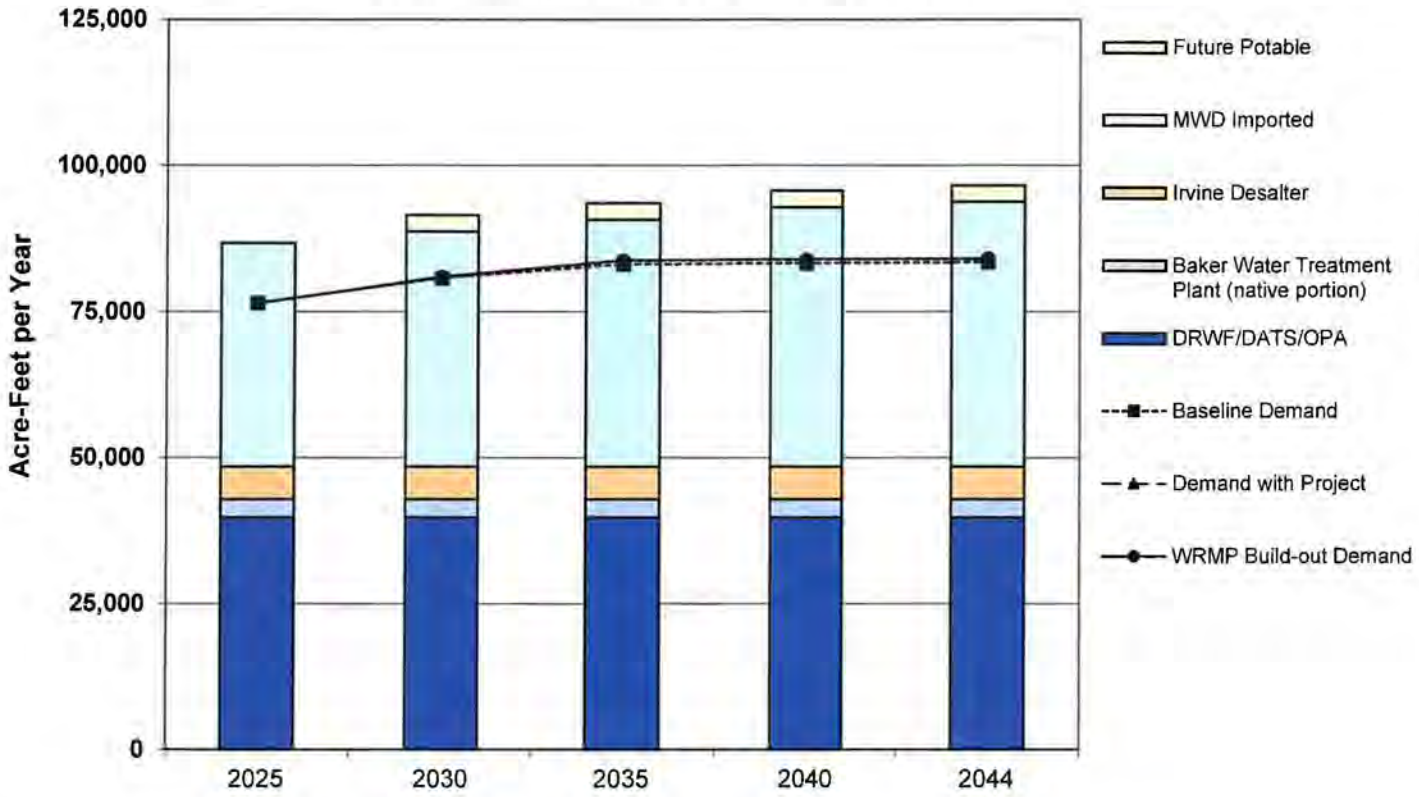
Figure 8
IRWD Maximum-Dry Supply & Demand - Nonpotable Water



(in cfs)	2025	2030	2035	2040	2044
Current Nonpotable Supplies					
Existing MWRP&LAWRP	47.6	47.6	47.6	47.6	47.6
Future MWRP&LAWRP	-	10.5	10.5	10.5	10.5
MWD Imported (Baker, ILP)	111.5	111.5	111.5	111.5	111.5
Irvine Desalter	6.2	6.2	6.2	6.2	6.2
Native Water	-	-	-	-	-
Maximum Supply Capability	165.3	175.8	175.8	175.8	175.8
Baseline Demand	103.8	102.3	100.8	101.1	101.3
Demand with Project	103.7	102.2	100.8	101.0	101.2
WRMP Build-out Demand	103.7	102.2	100.8	101.0	101.2
Reserve Supply with Project	61.6	73.6	75.1	74.8	74.6

Note: Downward trend reflects reduction in agricultural use over time.

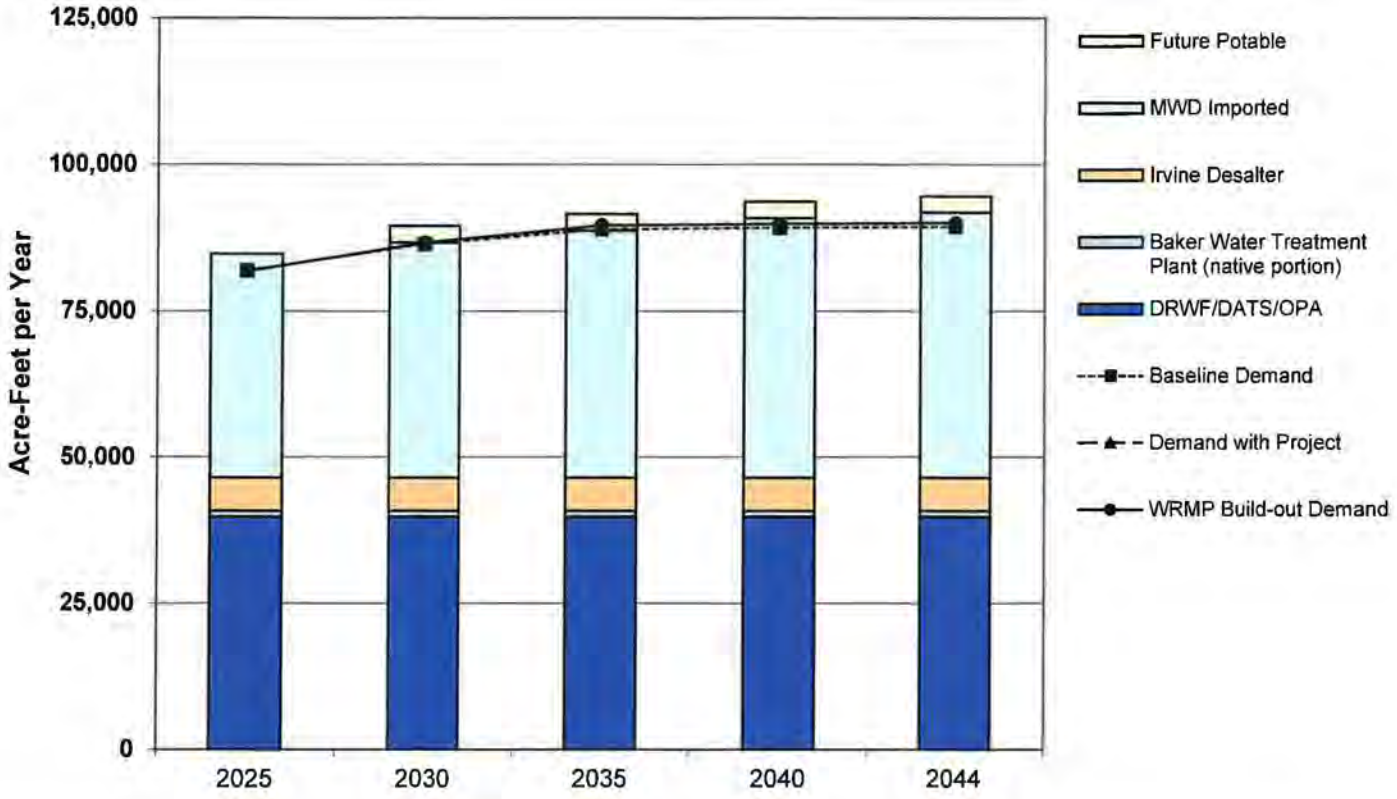
Figure 1a
IRWD Normal-Year Supply & Demand - Potable Water Under Temporary MWD Allocation*



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	38,270	40,222	42,274	44,430	45,323
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	3,048	3,048	3,048	3,048	3,048
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	89,154	93,906	95,958	98,114	99,007
Baseline Demand	76,540	80,802	83,150	83,359	83,525
Demand with Project	76,467	80,981	83,748	83,958	84,126
WRMP Build-out Demand	76,467	80,981	83,748	83,958	84,126
Reserve Supply with Project	12,687	12,926	12,210	14,157	14,882

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a MWD short-term allocation up to a level 5 in all of the 5-year increments. This does not reflect a reduction in demands, thus representing a conservative view of supply capability. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the 2020 UWMP. Under a MWD Allocation, the Baker WTP would be limited to available MWD and native water.

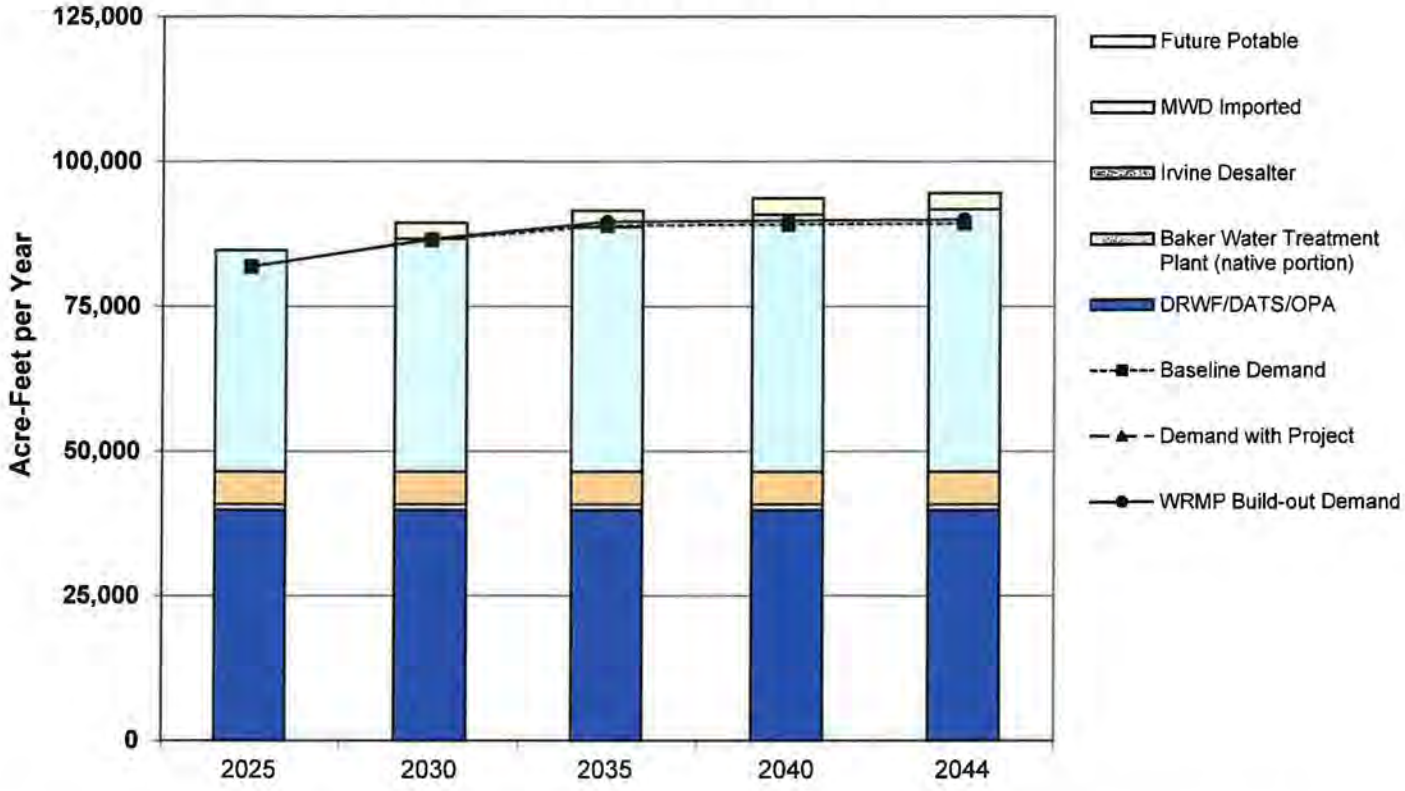
Figure 2a
IRWD Single Dry-Year Supply & Demand - Potable Water Under Temporary MWD Allocation*



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	38,270	40,222	42,274	44,430	45,323
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	87,106	91,858	93,910	96,066	96,959
Baseline Demand	81,898	86,458	88,971	89,194	89,372
Demand with Project	81,820	86,649	89,611	89,835	90,015
WRMP Build-out Demand	81,820	86,649	89,611	89,835	90,016
Reserve Supply with Project	5,286	5,209	4,299	6,231	6,945

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a MWD short-term allocation up to a level 5 in all of the 5-year increments. This does not reflect a reduction in demands, thus representing a conservative view of supply capability. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the 2020 UWMP. Under a MWD Allocation, the Baker WTP would be limited to available MWD and native water.

Figure 3a
IRWD Multiple Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation*



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	38,270	40,222	42,274	44,430	45,323
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	87,106	91,858	93,910	96,066	96,959
Baseline Demand	81,898	86,458	88,971	89,194	89,372
Demand with Project	81,820	86,649	89,611	89,835	90,015
WRMP Build-out Demand	81,820	86,649	89,611	89,835	90,015
Reserve Supply with Project	5,286	5,209	4,299	6,231	6,945

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a MWD short-term allocation up to a level 5 in all of the 5-year increments. This does not reflect a reduction in demands, thus representing a conservative view of supply capability. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the 2020 UWMP. Under a MWD Allocation, the Baker WTP would be limited to available MWD and native water.

Existing sources of identified water supply for the proposed project: IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as updated in the following table:

	Max Day (cfs)	Avg. Annual (AFY)		Annual by Category (AFY)
Current Supplies				
Potable - Imported 10				
East Orange County Feeder No. 2	41.4	18,746	1	
Allen-McColloch Pipeline*	64.7	29,296	1	
Orange County Feeder	18.0	8,150	1	
	124.1	56,192		56,192
Potable - Treated Surface				
Baker Treatment Plant (Imported) 10	6.3	4,554	6	4,554
Baker Treatment Plant (Native)	4.2	3,048	6	3,048
Potable - Groundwater				
Dyer Road Wellfield	80.0	28,000	2	
OPA Well	4.4	3,200	11	
Deep Aquifer Treatment System-DATS	12.3	8,618	2	
Wells 21 & 22	8.6	2,400	2	
Irvine Desalter	9.7	5,618	3	49,479
Total Potable Current Supplies	249.6			113,273
Nonpotable - Recycled Water				
MWRP (25.2 mgd)	39.1	28,228	4	
LAWRP (5.5 mgd)	8.5	6,161	4	
Future MWRP & LAWRP	10.6	7,623	5	42,012
Nonpotable - Imported 10				
Baker Aqueduct	40.2	11,651	6	
Irvine Lake Pipeline	65.0	9,000	7	
	105.2	20,651		20,651
Nonpotable - Groundwater				
Irvine Desalter-Nonpotable	6.2	3,461	8	3,461
Nonpotable Native				
Irvine Lake (see Baker Treatment Plant above)	4.2	3,048	6,9	
Total Nonpotable Current Supplies (Excludes Native)	169.6			66,124
Total Combined Current Supplies	419.2			179,397
Supplies Under Development				
Potable Supplies				
Future Groundwater Production Facilities	3.9	2,800		2,800
Total Under Development	3.9	2,800		2,800
Total Supplies				
Potable Supplies	253.4			116,073
Nonpotable Supplies	169.6			66,124
Total Supplies (Current and Under Development)	423.0			182,197

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.6. Max Day is equivalent to Treatment Plant Production

2 Contract amount - See Assessment Potable Supply-Groundwater(iii). Due to groundwater limitations, value changed from 6,329 AF to 2,400 AF

3 Contract amount - See Assessment Potable Supply-Groundwater (iv) and (v). Maximum day well capacity is compatible with contract amount.

4 MWRP 28.0 mgd treatment capacity (28,228 AFY RW production) with 90% plant efficiency (25.2 mgd) and LAWRP permitted 5.5 mgd tertiary treatment capacity (6,161 AFY)

5 Future estimated MWRP & LAWRP recycled water production. Includes biosolids and expansion to 33 mgd

6 Since 2017, Baker Water Treatment Plant (WTP) treats imported and native water. Baker Aqueduct capacity has been allocated to Baker WTP participants and IRWD owns 46.50 cfs in Baker Aqueduct, of which, 10.5 cfs is for for potable treatment. IRWD has 36 cfs remaining capacity for non-potable uses. The nonpotable average use is based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Assessment Footnote 8, page 27). In 2023, IRWD executed an Agreement that sells 3 cfs to South County agencies, leaving 7.5 cfs for daily use for IRWD. However, should an emergency arise, IRWD retains the right to use the 3 cfs sold. The amount shown in the table remains 10.5 cfs

7 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional imported water from MWD through the Santiago Lateral.

8 Contract amount - See Assessment Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.

9 Based on 70+ years historical average of Santiago Creek Inflow into Irvine Lake. Since 2020, native water is treated through Baker WTP.

10 Supplies in this table are total and are not adjusted to account for any reductions in imported water.

11 Per Agreement with the City of Orange, average annual capacity increased to 3,200 acre-feet

*64.7 cfs is current assigned capacity; based on increased peak flow, IRWD can purchase 10 cfs more (see page 25 (b)(1)(iii))

2. Information concerning supplies

(a)(1) Existing sources of identified water supply for the proposed Project.

IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as shown in the following table:

(b) Required information concerning currently available and under-development water supply entitlements, water rights and water service contracts:

(1) Written contracts or other proof of entitlement.[4] [5]

•POTABLE SUPPLY - IMPORTED[6]

Potable imported water service connections (currently available).

(i) Potable imported water is delivered to IRWD at various service connections to the imported water delivery system of The Metropolitan Water District of Southern California ("MWD"): service connections CM-01A and OC-7 (Orange County Feeder); CM-10, CM-12, OC-38, OC-39, OC-57, OC-58, OC-63 (East Orange County Feeder No. 2); and OC-68, OC-71, OC-72, OC-73/73A, OC-74, OC-75, OC-83, OC-84, OC-87 (Allen-McColloch Pipeline). IRWD's entitlements regarding service from the MWD delivery system facilities are described in the following paragraphs and summarized in the above Table ((2)(a)(1)). IRWD receives imported water service through Municipal Water District of Orange County ("MWDOC"), a member agency of MWD.

Allen-McColloch Pipeline ("AMP") (currently available).

(ii) Agreement For Sale and Purchase of Allen-McColloch Pipeline, dated as of July 1, 1994 (Metropolitan Water District Agreement No. 4623) ("AMP Sale Agreement"). Under the AMP Sale Agreement, MWD purchased the Allen-McColloch Pipeline (formerly known as the "Diemer Intertie") from MWDOC, the MWDOC Water Facilities Corporation and certain agencies, including IRWD and Los Alisos Water District ("LAWD"),[7] identified as "Participants" therein. Section

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[4] In some instances, the contractual and other legal entitlements referred to in the following descriptions are stated in terms of flow capacities, in cubic feet per second (cfs). In such instances, the cfs flows are converted to volumes of AFY for purposes of analyzing supply sufficiency in this assessment, by dividing the capacity by a peaking factor of 1.8 (potable) or 2.5 (nonpotable), consistent with maximum day peaking factors used in the WRMP. The resulting reduction in assumed available annual AFY volumes through the application of these factors recognizes that connected capacity is provided to meet peak demands and that seasonal variation in demand and limitations in local storage prevent these capacities from being utilized at peak capacity on a year-round basis. However, the application of these factors produces a conservatively low estimate of annual AFY volumes from these connections; additional volumes of water are expected to be available from these sources.

[5] In the following discussion, contractual and other legal entitlements are characterized as either potable or nonpotable, according to the characterization of the source of supply. Some of the nonpotable supplies surplus to nonpotable demand could potentially be rendered potable by the addition of treatment facilities; however, except where otherwise noted, IRWD has no current plans to do so.

[6] See Imported Supply - Additional Information, below, concerning the availability of the MWD supply.

[7] IRWD has succeeded to LAWD's interests in the AMP and other LAWD water supply facilities and rights

5.02 of the AMP Sale Agreement obligates MWD to meet IRWD's and the other Participants' requests for deliveries and specified minimum hydraulic grade lines at each connection serving a Participant, subject to availability of water. MWD agrees to operate the AMP as any other MWD pipeline. MWD has the right to operate the AMP on a "utility basis," meaning that MWD need not observe capacity allocations of the Participants but may use available capacity to meet demand at any service connection.

The AMP Sale Agreement obligates MWD to monitor and project AMP demands and to construct specified pump facilities or make other provision for augmenting MWD's capacity along the AMP, at MWD's expense, should that be necessary to meet demands of all of the Participants (Section 5.08).

(iii) Agreement For Allocation of Proceeds of Sale of Allen-McColloch Pipeline, dated as of July 1, 1994 ("AMP Allocation Agreement"). This agreement, entered into concurrently with the AMP Sale Agreement, provided each Participant, including IRWD, with a capacity allocation in the AMP, for the purpose of allocating the sale proceeds among the Participants in accordance with their prior contractual capacities adjusted to conform to their respective future demands. IRWD's capacity under the AMP Allocation Agreement (including its capacity as legal successor agency to LAWD) is 64.69 cfs at IRWD's first four AMP connections, 49.69 cfs at IRWD's next five downstream AMP connections and 35.01 and 10.00 cfs, respectively at IRWD's remaining two downstream connections. The AMP Allocation Agreement further provides that if a Participant's peak flow exceeds its capacity, the Participant shall "purchase" additional capacity from the other Participants who are using less than their capacity, until such time as MWD augments the capacity of the AMP. The foregoing notwithstanding, as mentioned in the preceding paragraph, the allocated capacities do not alter MWD's obligation under the AMP Sale Agreement to meet all Participants' demands along the AMP, and to augment the capacity of the AMP if necessary. Accordingly, under these agreements, IRWD can legally increase its use of the AMP beyond the above-stated capacities but would be required to reimburse other Participants from a portion of the proceeds IRWD received from the sale of the AMP.

(iv) Improvement Subleases (or "FAP" Subleases) [MWDOC and LAWD; MWDOC and IRWD], dated August 1, 1989; 1996 Amended and Restated Allen-McColloch Pipeline Subleases [MWDOC and LAWD; MWDOC and IRWD], dated March 1, 1996. IRWD subleases its AMP capacity, including the capacity it acquired as successor to LAWD. To facilitate bond financing for the construction of the AMP, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership of the pipeline, and the Participants would be sublessees. As is the case with the AMP Sale Agreement, the subleases similarly provide that water is subject to availability.

East Orange County Feeder No. 2 ("EOCF#2") (currently available).

(v) Agreement For Joint Exercise of Powers For Construction, Operation and

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mentioned in this assessment, by virtue of the consolidation of IRWD and LAWD on December 31, 2000.

Maintenance of East Orange County Feeder No. 2, dated July 11, 1961, as amended on July 25, 1962, and April 26, 1965; Agreement Re Capacity Rights In Proposed Water Line, dated September 11, 1961 ("IRWD MWDOC Assignment Agreement"); Agreement Regarding Capacity Rights In the East Orange County Feeder No. 2, dated August 28, 2000 ("IRWD Coastal Assignment Agreement"). East Orange County Feeder No. 2 ("EOCF#2"), a feeder linking Orange County with MWD's feeder system, was constructed pursuant to a joint powers agreement among MWDOC (then called Orange County Municipal Water District), MWD, Coastal Municipal Water District ("Coastal"), Anaheim and Santa Ana. A portion of IRWD's territory is within MWDOC and the remainder is within the former Coastal (which was consolidated with MWDOC in 2001). Under the IRWD MWDOC Assignment Agreement, MWDOC assigned 41 cfs of capacity to IRWD in the reaches of EOCF#2 upstream of the point known as Coastal Junction (reaches 1 through 3), and 27 cfs in reach 4, downstream of Coastal Junction. Similarly, under the IRWD Coastal Assignment Agreement, prior to Coastal's consolidation with MWDOC, Coastal assigned to IRWD 0.4 cfs of capacity in reaches 1 through 3 and 0.6 cfs in reach 4 of EOCF#2. Delivery of water through EOCF#2 is subject to the rules and regulations of MWD and MWDOC and is further subject to application and agreement of IRWD respecting turnouts.

Orange County Feeder (currently available)

(vi) Agreement, dated March 13, 1956. This 1956 Agreement between MWDOC's predecessor district and the Santa Ana Heights Water Company ("SAHWC") provides for delivery of MWD imported supply to the former SAHWC service area. SAHWC's interests were acquired on behalf of IRWD through a stock purchase and IRWD annexation of the SAHWC service area in 1997. The supply is delivered through a connection to MWD's Orange County Feeder designated as OC-7.

(vii) Agreement For Transfer of Interest In Pacific Coast Highway Water Transmission and Storage Facilities From The Irvine Company To the Irvine Ranch Water District, dated April 23, 1984; Joint Powers Agreement For the Construction, Operation and Maintenance of Sections 1a, 1b and 2 of the Coast Supply Line, dated June 9, 1989; Agreement, dated January 13, 1955 ("1955 Agreement"). The jointly constructed facility known as the Coast Supply Line ("CSL"), extending southward from a connection with MWD's Orange County Feeder at Fernleaf Street in Newport Beach, was originally constructed pursuant to a 1952 agreement among Laguna Beach County Water District ("LBCWD"), The Irvine Company (TIC) and South Coast County Water District. Portions were later reconstructed. Under the above-referenced transfer agreement in 1984, IRWD succeeded to TIC's interests in the CSL. The CSL is presently operated under the above-referenced 1989 joint powers agreement, which reflects IRWD's ownership of 10 cfs of capacity. The 1989 agreement obligates LBCWD, as the managing agent and trustee for the CSL, to purchase water and deliver it into the CSL for IRWD. LBCWD purchases such supply, delivered by MWD to the Fernleaf connection, pursuant to the 1955 Agreement with Coastal (now MWDOC).

Baker Water Treatment Plant (currently available)

IRWD recently constructed the Baker Water Treatment Plant (Baker WTP) in partnership with El Toro Water District, Moulton-Niguel Water District, Santa Margarita Water District and Trabuco Canyon Water District. The Baker WTP is supplied with untreated imported water from MWD and native Irvine Lake water supply. IRWD owns 10.5 cfs of treatment capacity rights in the Baker WTP.[8]

•POTABLE SUPPLY - GROUNDWATER

(i) Orange County Water District Act ("OCWD"), Water Code App., Ch. 40 ("Act"). IRWD is an operator of groundwater-producing facilities in the Orange County Groundwater Basin (the "Basin"). Although the rights of the producers within the Basin vis a vis one another have not been adjudicated, they nevertheless exist and have not been abrogated by the Act (§40-77). The rights consist of municipal appropriators' rights and may include overlying and riparian rights. The Basin is managed by OCWD under the Act, which functions as a statutorily-imposed physical solution. The Act empowers OCWD to impose replenishment assessments and basin equity assessments on production and to require registration of water-producing facilities and the filing of certain reports; however, OCWD is expressly prohibited from limiting extraction unless a producer agrees to such limitation (§ 40-2(6) (c)) and from impairing vested rights to the use of water (§ 40-77). Thus, producers may install and operate production facilities under the Act; OCWD approval is not required. OCWD is required to annually investigate the condition of the Basin, assess overdraft and accumulated overdraft, and determine the amount of water necessary for replenishment (§40-26). OCWD has studied the Basin replenishment needs and potential projects to address growth in demand through 2035 in its Final Draft Long-Term Facilities Plan (January 2006), last updated November 19, 2014. The Long-Term Facilities Plan is updated approximately every five years.

(ii) *Irvine Ranch Water District v. Orange County Water District*, Orange County Superior Court Case No. 795827. A portion of IRWD is outside the jurisdictional boundary of OCWD. IRWD is eligible to annex the Santa Ana River Watershed portion of this territory to OCWD, under OCWD's current annexation policy (OCWD Resolution No. 86-2-15, adopted on February 19, 1986, and reaffirmed on June 2, 1999). This September 29, 1998, Superior Court ruling indicates that IRWD is entitled to deliver groundwater from the Basin to the IRWD service area irrespective of whether such area is also within OCWD.

Dyer Road Wellfield ("DWRF") / Deep Aquifer Treatment System ("DATS") (currently available)

(iii) Agreement For Water Production and Transmission Facilities, dated March 18, 1981, as amended May 2, 1984, September 19, 1990, and November 3,

[8] The Baker WTP is supplied nonpotable imported water through the existing Baker Pipeline. IRWD's existing Baker Pipeline capacity (see Section 2(b)(1) NONPOTABLE SUPPLY – IMPORTED) has been apportioned to the Baker WTP participants based on Baker WTP capacity ownership, and IRWD retains 10.5 cfs of pipeline capacity through the Baker WTP for potable supply and retains 36 cfs in Reach 1U of the Baker Pipeline capacity for nonpotable supply. In 2023, IRWD executed an agreement that sells 3 cfs to South County agencies, leaving 7.5 cfs for daily use for IRWD. However, should an emergency arise, IRWD retains the right to the use of the 3 cfs sold.

1999 (the "DRWF Agreement"). The DRWF Agreement, among IRWD, OCWD and Santa Ana, concerns the development of IRWD's Dyer Road Wellfield (DRWF), within the Basin. The DRWF consists of 16 wells pumping from the non-colored water zone of the Basin and 2 wells (with colored-water treatment facilities) pumping from the deep, colored-water zone of the Basin (the colored-water portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or DATS.) Under the DRWF Agreement, an "equivalent" basin production percentage ("BPP") has been established for the DRWF, currently 28,000 AFY of non-colored water and 8,000 AFY of colored water, provided any amount of the latter 8,000 AFY not produced results in a matching reduction of the 28,000 AFY BPP. Although typically IRWD production from the DRWF does not materially exceed the equivalent BPP, the equivalent BPP is not an extraction limitation; it results in imposition of monetary assessments on the excess production. The DRWF Agreement also establishes monthly pumping amounts for the DRWF. With the addition of the Concentrated Treatment System ("CATS"), IRWD has increased the yield of DATS.

Irvine Subbasin / Irvine Desalter (currently available)

(iv) First Amended and Restated Agreement, dated March 11, 2002, as amended June 15, 2006, restating May 5, 1988 agreement ("Irvine Subbasin Agreement"). TIC has historically pumped agricultural water from the Irvine Subbasin. (As in the rest of the Basin of which this subbasin is a part, the groundwater rights have not been adjudicated and OCWD provides governance and management under the Act.) The 1988 agreement between IRWD and TIC provided for the joint use and management of the Irvine Subbasin. The 1988 agreement further provided that the 13,000 AFY annual yield of the Irvine Subbasin ("Subbasin") would be allocated 1,000 AFY to IRWD and 12,000 AFY to TIC. Under the restated Irvine Subbasin Agreement, the foregoing allocations were superseded as a result of TIC's commencement of the building its Northern Sphere Area project, with the effect that the Subbasin production capability, wells and other facilities, and associated rights have been transferred from TIC to IRWD, and IRWD has assumed the production from the Subbasin. In consideration of the transfer, IRWD is required to count the supplies attributable to the transferred Subbasin production in calculating available supplies for the Northern Sphere Area project and other TIC development and has agreed that they will not be counted toward non-TIC development.

A portion of the existing Subbasin water production facilities produce water which is of potable quality. IRWD could treat some of the water produced from the Subbasin for potable use, by means of the Desalter and other projects. Although, as noted above, the Subbasin has not been adjudicated and is managed by OCWD, TIC reserved water rights from conveyances of its lands as development over the Subbasin has occurred, and under the Irvine Subbasin Agreement TIC has transferred its rights to IRWD.

(v) Second Amended and Restated Agreement Between Orange County Water District and Irvine Ranch Water District Regarding the Irvine Desalter Project, dated June 11, 2001, and other agreements referenced therein. This agreement provides for the extraction and treatment of subpotable groundwater from the Irvine Subbasin, a portion of the Basin. As is the case with the remainder of the

Basin, IRWD's entitlement to extract this water is not adjudicated, but the use of the entitlement is governed by the OCWD Act. (See also, discussion of Irvine Subbasin in the preceding paragraph.) A portion of the product water has been delivered into the IRWD potable system, and the remainder has been delivered into the IRWD nonpotable system.

Orange Park Acres (currently available)

On June 1, 2008, through annexation and merger, IRWD acquired the water system of the former Orange Park Acres Mutual Water company, including its well ("OPA Well"). The well is operated within the Basin.

Wells 21 and 22 (currently available)

In early 2013, IRWD completed construction of treatment facilities, pipelines, and wellhead facilities for Wells 21 and 22. Water supplied through this project became available in 2013. The wells are operated within the Basin.

Irvine Wells (under development)

(vi) IRWD is pursuing the installation of production facilities in the west Irvine, Tustin Legacy and Tustin Ranch portions of the Basin. These groundwater supplies are considered to be under development; however, four wells have been drilled and have previously produced groundwater, three wells have been drilled but have not been used as production wells to date, and a site for an additional well and treatment facility has been acquired by IRWD. These production facilities can be constructed and operated under the Act; no statutory or contractual approval is required to do so. Appropriate environmental review has or will be conducted for each facility. See discussion of the Act under Potable Supply - Groundwater, paragraph (i), above.

•NONPOTABLE SUPPLY - RECYCLED

Water Recycling Plants (currently available)

Water Code Section 1210. IRWD supplies its own recycled water from sewage collected by IRWD and delivered to IRWD's Michelson Water Recycling Plant ("MWRP") and Los Alisos Water Recycling Plant ("LAWRP"). Under the recently completed MWRP Phase II Capacity Expansion Project, IRWD increased its tertiary treatment capacity on the existing MWRP site to produce sufficient recycled water to meet the projected demand through the year 2044. MWRP currently has a permitted tertiary capacity of 28 million gallons per day ("MGD") and LAWRP currently has a permitted tertiary capacity of 5.5 MGD. Water Code Section 1210 provides that the owner of a sewage treatment plant operated for the purposes of treating wastes from a sanitary sewer system holds the exclusive right to the treated effluent as against anyone who has supplied the water discharged into the sewer system. IRWD's permits for the operation of MWRP and LAWRP allow only irrigation and other customer uses of recycled water, and do not permit stream discharge of recycled water under normal conditions; thus, no issue of downstream appropriation arises, and IRWD is entitled to deliver all of the effluent to meet contractual and customer demands. Additional

reclamation capacity will augment local nonpotable supplies and improve reliability.

•NONPOTABLE SUPPLY - IMPORTED[9]

Baker Pipeline (currently available)

Santiago Aqueduct Commission ("SAC") Joint Powers Agreement, dated September 11, 1961, as amended December 20, 1974, January 13, 1978, November 1, 1978, September 1, 1981, October 22, 1986, and July 8, 1999 (the "SAC Agreement"); Agreement Between Irvine Ranch Water District and Carma-Whiting Joint Venture Relative to Proposed Annexation of Certain Property to Irvine Ranch Water District, dated May 26, 1981 (the "Whiting Annexation Agreement"); service connections OC-13/13A, OC-33/33A. The imported untreated water pipeline initially known as the Santiago Aqueduct and now known as the Baker Pipeline was constructed under the SAC Agreement, a joint powers agreement. The Baker Pipeline is connected to MWD's Santiago Lateral. IRWD's capacity in the Baker Pipeline includes the capacity it subleases as successor to LAWD, as well as capacity rights IRWD acquired through the Whiting Annexation Agreement. (To finance the construction of AMP parallel untreated reaches which were incorporated into the Baker Pipeline, replacing original SAC untreated reaches that were made a part of the AMP potable system, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership, and the participants would be sublessees.) IRWD's original capacities in the Baker Pipeline include 52.70 cfs in the first reach, 12.50 cfs in each of the second, third and fourth reaches and 7.51 cfs in the fifth reach of the Baker Pipeline. These existing Baker Pipeline capacities have been apportioned to the Baker WTP participants based on Baker WTP capacity ownership. IRWD retains 10.5 cfs of the pipeline capacity for potable supply through the Baker WTP and retains 36 cfs in Reach 1U of the Baker Pipeline capacity for nonpotable supply (See also footnote 8, page 27). In 2023, IRWD executed an Agreement that sells 3 cfs to South County agencies, leaving 7.5 cfs for daily use for IRWD. However, should an emergency arise, IRWD retains the right to use the 3 cfs sold. Water is subject to availability from MWD.

•NONPOTABLE SUPPLY - NATIVE

Irvine Lake (currently available)

(i) Permit For Diversion and Use of Water ("Permit No. 19306") issued pursuant to Application No. 27503; License For Diversion and Use of Water ("License 2347") resulting from Application No. 4302 and Permit No. 3238; License For Diversion and Use of Water ("License 2348") resulting from Application No. 9005 and Permit No. 5202. The foregoing permit and licenses, jointly held by IRWD (as successor to The Irvine Company ("TIC") and Carpenter Irrigation District ("CID")) and Serrano Water District ("SWD"), secure appropriative rights to the

[9] See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

flows of Santiago Creek. Under Licenses 2347 and 2348, IRWD and SWD have the right to diversion by storage at Santiago Dam (Irvine Lake) and a submerged dam, of a total of 25,000 AFY. Under Permit No. 19306, IRWD and SWD have the right to diversion by storage of an additional 3,000 AFY by flashboards at Santiago Dam (Irvine Lake). (Rights under Permit No. 19306 may be junior to an OCWD permit to divert up to 35,000 AFY of Santiago Creek flows to spreading pits downstream of Santiago Dam.) The combined total of native water that may be diverted to storage under these licenses and permit is 28,000 AFY. A 1996 amendment to License Nos. 2347, 2348 and 2349 [replaced by Permit No. 19306 in 1984] limits the withdrawal of water from the Lake to 15,483 AFY under the licenses. This limitation specifically references the licenses and doesn't reference water stored pursuant to other legal entitlements. The use and allocation of the native water is governed by the agreements described in the next paragraph.

(ii) Agreement, dated February 6, 1928 ("1928 Agreement"); Agreement, dated May 15, 1956, as amended November 12, 1973 ("1956 Agreement"); Agreement, dated as of December 21, 1970 ("1970 Agreement"); Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the Acquisition of Water Rights In and To Santiago Creek, As Well As Additional Storage Capacity in Irvine Lake, dated as of May 31, 1974 ("1974 Agreement"). The 1928 Agreement was entered into among SWD, CID and TIC, providing for the use and allocation of native water in Irvine Lake. Through the 1970 Agreement and the 1974 Agreement, IRWD acquired the interests of CID and TIC, leaving IRWD and SWD as the two co-owners. TIC retains certain reserved rights. The 1928 Agreement divides the stored native water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally yield three-fourths of the amount over 1,000 AF.[10] The agreements also provide for evaporation and spill losses and carryover water remaining in the Lake at the annual allocation dates. Given the dependence of native water on rainfall, for purposes of this assessment only a small portion of IRWD's share of the 28,000 AFY of native water rights (3,048 AFY in normal years and 1,000 AFY in single and multiple-dry years) is shown in currently available supplies, based on averaging of historical data. However, IRWD's ability to supplement Irvine Lake storage with its imported untreated water supplies, described herein, offsets the uncertainty associated with the native water supply.

•NONPOTABLE SUPPLY - GROUNDWATER

Irvine Subbasin / Irvine Desalter (currently available)

(i) IRWD's entitlement to produce nonpotable water from the Irvine Subbasin is included within the Irvine Subbasin Agreement. See discussion of the Irvine Subbasin Agreement under Potable Supply - Groundwater; paragraph (iv), above.

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10 The 1956 Agreement provides for facilities to deliver MWD imported water into Irvine Lake, and grants storage capacity for the imported water. By succession, IRWD owns 9,000 AFY of this 12,000 AFY imported water storage capacity. This storage capacity does not affect availability of the imported supply, which can be either stored or delivered for direct use by customers.

(ii) See discussion of the Irvine Desalter project under Potable Supply - Groundwater, paragraph (v), above. The Irvine Desalter project will produce nonpotable as well as potable water.

•IMPORTED SUPPLY - ADDITIONAL INFORMATION

As described above, the imported supply from MWD is contractually subject to availability. To assist local water providers in assessing the adequacy of local water supplies that are reliant in whole or in part on MWD's imported supply, MWD has provided information concerning the availability of the supplies to its entire service area. In the MWD 2020 UWMP, MWD has extended its planning timeframe out through 2045 to ensure that the MWD 2020 UWMP may be used as a source document for meeting requirements for sufficient supplies. In addition, the MWD 2020 UWMP includes "Justifications for Supply Projections" (Appendix A-3) that details the planning, legal, financial, and regulatory basis for including each source of supply in the plan. The MWD 2020 UWMP summarizes MWD's planning initiatives over the past 15 years, which includes the Integrated Resources Plan (IRP), the IRP 2015 Update, the WSDM Plan, Strategic Plan and Rate Structure. The reliability analysis in MWD's 2015 IRP Update shows that MWD can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period through 2040. The MWD 2020 UWMP includes tables that show the region can provide reliable supplies under both the single driest year (1977) and multiple dry years (1990-92) through 2045. MWD has also identified buffer supplies, including additional State Water Project groundwater storage and transfers that could serve to supply the additional water needed.

It is anticipated that MWD will revise its regional supply availability analysis periodically, if needed, to supplement the MWD 2020 UWMP in years when the MWD UWMP is not being updated.

IRWD is permitted by the statute (Wat. Code, § 10610 *et seq.*) to rely upon the water supply information provided by the wholesaler concerning a wholesale water supply source, for use in preparing its UWMPs. In turn, the statute provides for the use of UWMP information to support water supply assessments and verifications. In accordance with these provisions, IRWD is entitled to rely upon the conclusions of the MWD UWMP. As referenced above under Summary of Results of Demand-Supply Comparisons - ***Actions on Delta Pumping,*** MWD has provided additional information on its imported water supply.

MWD's reserve supplies, together with the fact that IRWD relies on MWD supplies as supplemental supplies that need not be used to the extent IRWD operates currently available and under-development local supplies, build a margin of safety into IRWD's supply availability.

(2) Adopted capital outlay program to finance delivery of the water supplies.

All necessary delivery facilities currently exist for the use of the *currently available* and *under-development* supplies assessed herein, with the exception of future groundwater wells, and IRWD sub-regional and developer-dedicated conveyance facilities necessary to complete the local distribution systems for the

Project. IRWD's turnout at each MWD connection and IRWD's regional delivery facilities are sufficiently sized to deliver all of the supply to the sub-regional and local distribution systems.

With respect to future groundwater well projects (PR Nos. 11828 and 11829), IRWD adopted its fiscal year 2023-24 capital budget on April 24, 2023 (Resolution No. 2023-6), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) For these facilities, as well as unbuilt IRWD sub-regional conveyance facilities, the sources of funding are previously authorized general obligation bonds, revenue-supported certificates of participation and/or capital funds held by IRWD Improvement Districts. IRWD has maintained a successful program for the issuance of general obligation bonds and certificates of participation on favorable borrowing terms, and IRWD has received AAA public bond ratings. IRWD has approximately $585.5 million (water) and $711.1 million (recycled water) of unissued, voter-approved general obligation bond authorization. Certificates of participation do not require voter approval. Proceeds of bonds and available capital funds are expected to be sufficient to fund all IRWD facilities for delivery of the supplies under development. Tract-level conveyance facilities are required to be donated to IRWD by the Applicant or its successor(s) at time of development.

See also the MWD 2020 UWMP, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

(3) Federal, state and local permits for construction of delivery infrastructure.

Most IRWD delivery facilities are constructed in public right-of-way or future right-of-way. State statute confers on IRWD the right to construct works along, under or across any stream of water, watercourse, street, avenue, highway, railway, canal, ditch, or flume (Water Code Section 35603). Although this right cannot be denied, local agencies may require encroachment permits when work is to be performed within a street. If easements are necessary for delivery infrastructure, IRWD requires the developer to provide them. The crossing of watercourses or areas with protected species requires federal and/or state permits as applicable.

See also the MWD 2020 UWMP, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(4) Regulatory approvals for conveyance or delivery of the supplies.

See response to preceding item (3). Additionally, in general, supplies under development may necessitate the preparation and completion of environmental documents and/or regulatory approvals prior to full construction and implementation. IRWD obtains such approvals when required, and copies of documents pertaining to approvals can be obtained from IRWD.

See also the MWD 2020 UWMP, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

3. Other users and contractholders (identified supply not previously used).

For each of the water supply sources identified by IRWD, if no water has been received from that source(s), IRWD is required to identify other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, that source(s):

> Water has been received from all listed sources. A small quantity of Subbasin water is used by Woodbridge Village Association for the purpose of supplying its North and South Lakes. There are no other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, the Irvine Subbasin.

4. Information concerning groundwater included in the supply identified for the Project:

(a) Relevant information in the Urban Water Management Plan (UWMP):

> See Irvine Ranch Water District 2020 UWMP, section 6.2.

(b) Description of the groundwater basin(s) from which the Project will be supplied:

> The Orange County Groundwater Basin ("Basin") is described in the Orange County Water District Groundwater Management Plan ("GMP") 2015 Update, dated June 17, 2015[11]. The rights of the producers within the Basin vis a vis one another have not been adjudicated. The Basin is managed by the Orange County Water District ("OCWD") for the benefit of municipal, agricultural, and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. Current production from the Basin is approximately 260,000 AFY.
>
> The DWR has not identified the Basin as "critically overdrafted," and has not identified the Basin as overdrafted in its most current bulletin that characterizes the condition of the Basin, Bulletin 118. The efforts being undertaken by OCWD to avoid long-term overdraft in the Basin are described in the OCWD GMP 2015 Update and OCWD Master Plan Report ("MPR"), including in particular, Chapters 4, 5, 6, 14 and 15 of the MPR. OCWD has also prepared a Long Term Facilities Plan ("LTFP") which was received by the OCWD Board in July 2009 and was last updated in November 2014. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin. See also following section on "***Sustainable Groundwater Management Act***".
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> Although the water supply assessment statute (Water Code Section 10910(f)) refers to elimination of "long-term overdraft," overdraft includes conditions which may be managed for optimum basin storage, rather than eliminated. OCWD's Act defines annual groundwater overdraft to be the quantity by which production

[11] OCWD has also prepared a Long-Term Facilities Plan which was received and filed by its Board in July 2009, and last updated in November 2014.

exceeds the natural replenishment of the Basin. Accumulated overdraft is defined in the OCWD Act to be the quantity of water needed in the groundwater basin forebay to prevent landward movement of seawater into the fresh groundwater body. However, seawater intrusion control facilities have been constructed by OCWD since the Act was written and have been effective in preventing landward movement of seawater. These facilities allow greater utilization of the storage capacity of the Basin.

OCWD has invested over $250 million in seawater intrusion control (injection barriers), recharge facilities, laboratories, and Basin monitoring to effectively manage the Basin. Consequently, although the Basin is defined to be in an "overdraft" condition, it is actually managed to allow utilization of up to 500,000 acre-feet of storage capacity of the basin during dry periods, acting as an underground reservoir and buffer against drought. OCWD has an optimal basin management target of 100,000 acre-feet of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also provide enough water in storage to offset decreased supplies during a two- to three year drought. If the Basin is too full, artesian conditions can occur along the coastal area, causing rising water and water logging, an adverse condition. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, Basin management and water rights protection, resulting in the elimination and prevention of adverse long-term "mining" overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during normal rainfall and drought periods. (OCWD GMP, OCWD MPR and LTFP)

OCWD's efforts include ongoing replenishment programs and planned capital improvements. It should be noted under OCWD's management of overdraft to maximize the Basin's use for annual production and recharge operations, overdraft varies over time as the Basin is managed to keep it in balance over the long term. The Basin is not operated on an annual safe-yield basis. (OCWD GMP, OCWD MPR, section 3.2 and LTFP, section 6). See also the following section on "***Sustainable Groundwater Management Act".***

(c) Description and analysis of the amount and location of groundwater pumped by IRWD from the Basin for the past five years:

The following table shows the amounts pumped, by groundwater source since the year 2002:

(In AFY)

Year (ending 6/30)	DRWF/DATS/ OPA/21-22	Irvine Subbasin (IRWD)	Irvine Subbasin (TIC)	LAWD[12]
2023	36,558	4,692	0	0

12 The water produced from IRWD's Los Alisos wells is not included in this assessment. IRWD is presently evaluating the future use of these wells.

2022	35,344	5,159	0	0
2021	38,722	3,644	0	0
2020	33,975	4,005	0	0
2019	38,603	3,961	0	0
2018	38,196	4,619	0	0
2017	39,787	4,077	0	169
2016	37,216	4,672	0	307
2015	40,656	9,840	0	336
2014	42,424	10,995	0	376
2013	38,617	8,629	0	282
2012	37,059	7,059	0	0
2011	34,275	7,055	0	0
2010	37,151	8,695	0	3
2009	38,140	7,614	0	0
2008	36,741	4,539	0	16
2007	37,864	5,407	0	6
2006	37,046	2,825	0	268
2005	36,316	2,285	628	357
2004	30,265	1,938	3,079	101
2003	24,040	2,132	4,234	598
2002	25,855	2,533	5,075	744

(d) Description and analysis of the amount and location of groundwater projected to be pumped by IRWD from the Basin:

IRWD has a developed groundwater supply of 35,200 AFY from its Dyer Road Wellfield (including the Deep Aquifer Treatment System), in the main portion of the Basin.

Although TIC's historical production from the Subbasin declined as its use of the Subbasin for agricultural water diminished, OCWD's and other historical production records for the Subbasin show that production has been as high as 13,000 AFY. Plans are also underway to expand IRWD's main Orange County Groundwater Basin supply (characterized as *under-development* supplies herein). (See Section 2 (a) (1) herein). IRWD anticipates the development of potential additional production facilities within both the main Basin and the Irvine Subbasin. However, such additional facilities have not been included or relied upon in this assessment. Additional groundwater development will provide an additional margin of safety as well as reduce future water supply costs to IRWD.

The following table summarizes future IRWD groundwater production from currently available and under-development supplies.

(In AFY)

Year (ending 6/30)	DRWF[13]	Future GW[14]	IDP (Potable)	IDP (Nonpotable)
2025	42,218	2,800	5,618	3,461
2030	42,218	2,800	5,618	3,461
2035	42,218	2,800	5,618	3,461
2040	42,218	2,800	5,618	3,461

(e) If not included in the 2020 UWMP, analysis of the sufficiency of groundwater projected to be pumped by IRWD from the Basin to meet the projected water demand of the Project:

See responses to 4(b) and 4(d).

The OCWD MPR and LTFP examined future Basin conditions and capabilities, water supply and demand, and identified projects to meet increased replenishment needs of the basin. With the implementation of OCWD's preferred projects, the Basin yield in the year 2025 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage ("BPP") that OCWD sets based on these factors.[15] Sufficient replenishment supplies are projected by the OCWD MPR to be available to OCWD to meet the increasing demand on the Basin. These supplies include capture of increasing Santa Ana River flows, purchases of replenishment water from MWD, and development of new local supplies. In 2008, OCWD began operating its replenishment supply project, the Groundwater Replenishment System project ("GWRS"). The GWRS currently produces approximately 100,000 AFY of new replenishment supply from recycled water (OCWD GMP).

Production of groundwater can exceed applicable basin production percentages

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13 See Potable Supply - Groundwater, paragraph (iii), above. DRWF non-colored production above 28,000 AFY and colored water production above 8,000 AFY are subject to contractually-imposed assessments. In addition, seasonal production amounts apply. This also includes 3,200 AFY for the OPA well and 2,800 AFY for Wells 21 & 22.

14 Under-development.

15 OCWD has adopted a basin production percentage of 85% for 2023-24. In prior years OCWD has maintained a basin production percentage that is lower than the current percentage, and IRWD anticipates that such reductions may occur from time to time as a temporary measure employed by OCWD to encourage lower pumping levels as OCWD implements other measures to reduce the current accumulated overdraft in the Basin. Any such reductions are not expected to affect any of IRWD's currently available groundwater supplies listed in this assessment, which are subject to a contractually-set equivalent basin production percentage as described or are exempt from the basin production percentage.

on a short-term basis, providing additional reliability during dry years or emergencies. Additional groundwater production is anticipated by OCWD in the Basin in dry years, as producers reduce their use of imported supplies, and the Basin is "mined" in anticipation of the eventual availability of replenishment water. (OCWD MPR, section 14.6.)

See also, Figures 1-8 hereto. IRWD assesses sufficiency of supplies on an aggregated basis, as neither groundwater nor other supply sources are allocated to particular projects or customers. Under the Irvine Subbasin Agreement, IRWD is contractually obligated to attribute the Subbasin supply only to TIC development projects for assessment purposes; however, the agreement does not allocate or assign rights in the Subbasin supply to any project.

Sustainable Groundwater Management Act. Pursuant to the Sustainable Groundwater Management Act ("SGMA"), the DWR has designated the Orange County groundwater basin, Basin 8-1, as a medium priority basin for purposes of groundwater management. The SGMA specifically calls for OCWD, which regulates the Orange County groundwater basin, to serve as the groundwater sustainability agency or "GSA". The SGMA allows Special Act Districts created by statute, such as OCWD, to prepare and submit an alternative to a Groundwater Sustainability Plan ("GSP") that is "functionally equivalent" to a GSP. Basin 8-1 includes the OCWD service area and several fringe areas outside of OCWD that are within the Basin 8-1 boundary. Per the requirements of SGMA, an Alternative Plan must encompass the entire groundwater basin as defined by DWR. On January 1, 2017, OCWD and the overlying agencies within Basin 8-1, including IRWD, jointly prepared and submitted an alternative plan in compliance with SGMA (Basin 8-1 Alternative). The Basin 8-1 Alternative was updated in January 2023.

5. ☒ This Water Supply Assessment is being completed for a project included in a prior water supply assessment. Check all of the following that apply:

☒ Changes in the Project have substantially increased water demand.

☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the Project.

☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment.

6. References

Water Resources Master Plan, Irvine Ranch Water District, Updated 2017

Water Shortage Contingency Plan, Irvine Ranch Water District, June 2021

2020 Urban Water Management Plan, Irvine Ranch Water District, June 2021

Proposed Framework for Metropolitan Water District's Delta Action Plan, Metropolitan Water District of Southern California, May 8, 2007

2007 IRP Implementation Report, Metropolitan Water District of Southern California, October 7, 2007

2010 Integrated Resources Plan Update, Metropolitan Water District of Southern California, October 2010

2015 Integrated Resources Plan Update, Metropolitan Water District of Southern California, January 2016

2020 Integrated Water Resources Plan Regional Needs Assessment, Metropolitan Water District of Southern California, April 2022

2020 Urban Water Management Plan, Metropolitan Water District of Southern California, June 2021

2020 Urban Water Management Plan, Municipal Water District of Orange County, May 2021

Climate Action Plan, Metropolitan Water District of Southern California, May 2022

Climate Action Plan Phase 2: Climate Change Analysis Guidance, California Department of Water Resources, September 2018

Master Plan Report, Orange County Water District, April 1999

Groundwater Management Plan 2015 Update, Orange County Water District, June 2015

Final Draft Long-Term Facilities Plan, Orange County Water District, January 2006

Long-Term Facilities Plan 2014 Update, Orange County Water District, November 2014

2021-2022 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District, February 2023

Basin 8-1 Alternative, Orange County Water District, January 2017

Basin 8-1 Alternative 2022 Update, Orange County Water District, January 2022

Exhibit A

Depiction of Project Area

Figure 2-3 Neighborhoods

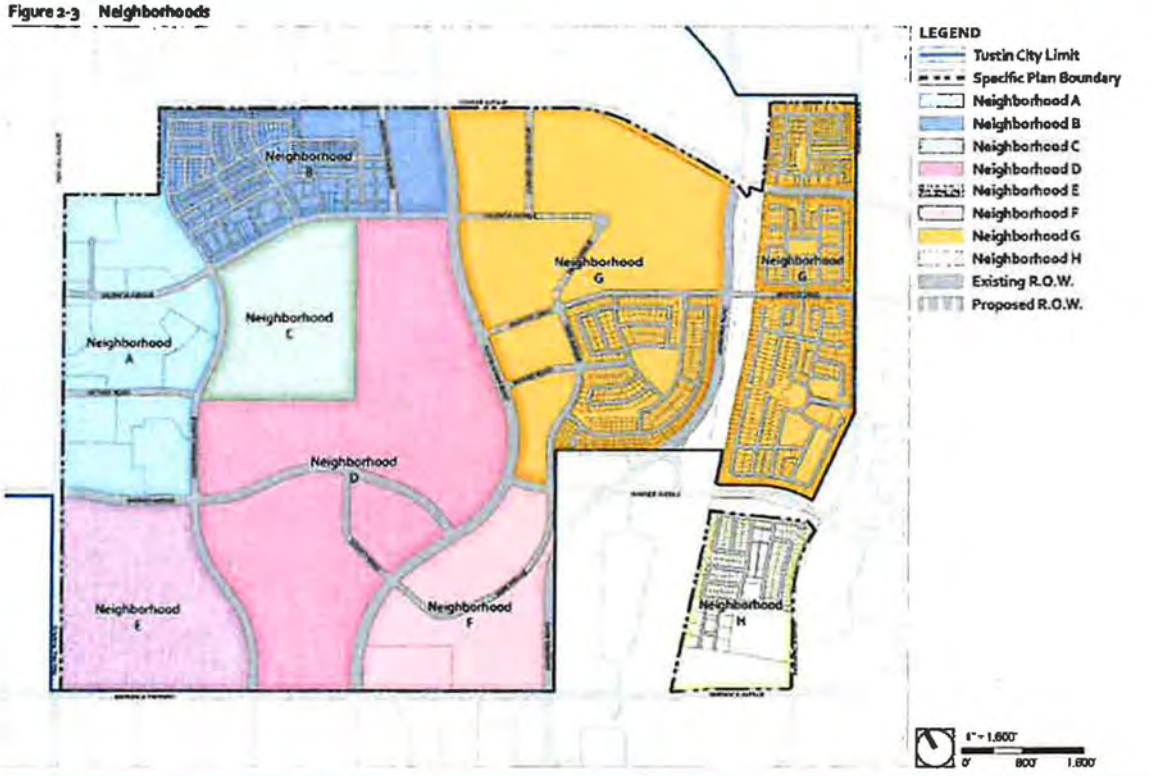

Exhibit B

Uses Included in Project

Public Works / Engineering

WATER RESOURCES

NOV 16 2023

IRVINE RANCH WATER DISTRICT

November 9, 2023

Kellie Welch
Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000

Re: Request for Water Supply Availability Assessment (Water Code §10910 *et seq.*) for Tustin Legacy Specific Plan Amendment in the City of Tustin

The City of Tustin hereby requests an assessment of water supply availability for the below-described project. The City has determined that the project is a "project" as defined in Water Code §10912, and has determined that a supplemental environmental impact report is required for the project.

Proposed Project Information

Project Title: Tustin Legacy Specific Plan Amendment to meet the objectives of the 2021-2029 Housing Element

Location of project: The Tustin Legacy Specific Plan is generally bounded by Red Hill Avenue on the west, Edinger Avenue on the north, Harvard Avenue on the east, and Barranca Parkway on the south. Jamboree Road transections the site. The Housing Element identified three sites in the TLSP for rezoning to accommodate a portion of the City's Regional Housing Needs Allocation (RHNA) spread across two geographically defined areas, referred to as Neighborhoods in the TLSP: Neighborhood D and Neighborhood G. The portions of Neighborhood D that are identified within the housing element sites inventory total 84.73 acres, including parcels within Neighborhood D North (HE Site 1A @ 39.87 acres) and D South (HE Site 1B @ 44.86 acres). Neighborhood G is in the northeastern portion of the TLSP site, and the housing element inventory allocates approximately 50 acres as being available for residential development. Figure 3-3, TLSP Neighborhoods, illustrates the location of Neighborhood D and G.

☒ (For projects requiring a new assessment under Water Code §10910 (h).) Previous Water Supply Assessment including this project was approved on July 13, 2015. This application requests a new Water Supply Assessment, due to the following (check all that apply):

☒ Changes in the project have substantially increased water demand

☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the project

300 Centennial Way, Tustin, CA 92780 • P: (714) 573-3150 • F: (714) 734-8991 • www.tustinca.org

☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment (Enclose maps and exhibits of the project)

Type of Development:

☒ *Residential*: No. of dwelling units: 2,211 RHNA units + 2,569 maximum density bonus units (Total additional units = 4,780 units); Plan Total (11,963 units)
☒ *Shopping center or business*: No. of employees N/A Sq. ft. of floor space 9,532,419 square feet total (no change)
☐ *Commercial office*: No. of employees N/A Sq. ft. of floor space N/A
☐ *Hotel or motel*: No. of rooms N/A
☐ *Industrial, manufacturing, processing or industrial park:* No. of employees N/A No. of acres N/A Sq. ft. of floor space N/A
☒ *Mixed use* (check and complete all above that apply)
☐ *Other*: N/A

Total acreage of project: 1,606-acre project area includes 1,511 acres in Tustin and approximately 95 acres in Irvine

Acreage devoted to landscape:
Greenbelt N/A golf course N/A parks 170 acres
Agriculture N/A other landscaped areas N/A

Number of schools two elementary schools and one middle/high school
Number of public facilities five (no change)

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements or potential uses to be added to the project to reduce or mitigate environmental impacts: none

What is the current land use of the area subject to a land use change under the project? The Tustin Legacy Specific Plan area contains existing residential, commercial, and institutional development and vacant land.

Is the project included in the existing General Plan? Yes If no, describe the existing General Plan Designation N/A

The City acknowledges that IRWD's assessment will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the assessment, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project, circumstances or conditions change or new information becomes available after the issuance of a Water Supply Assessment, the Water Supply Assessment may no longer be valid. The City will request a new Water Supply Assessment if it determines that one is required.

The City acknowledges that the Water Supply Assessment shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity, or facility, and that the issuance of the Water Supply Assessment shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

CITY OF TUSTIN

By: _____
Ken Nishikawa,
Deputy Director of Public Work, Engineering\City Engineer

REQUEST RECEIVED:

Date: 11/16/23

By: _____
Irvine Ranch Water District

REQUEST COMPLETE:

Date: 11/27/23

By: _____
Irvine Ranch Water District